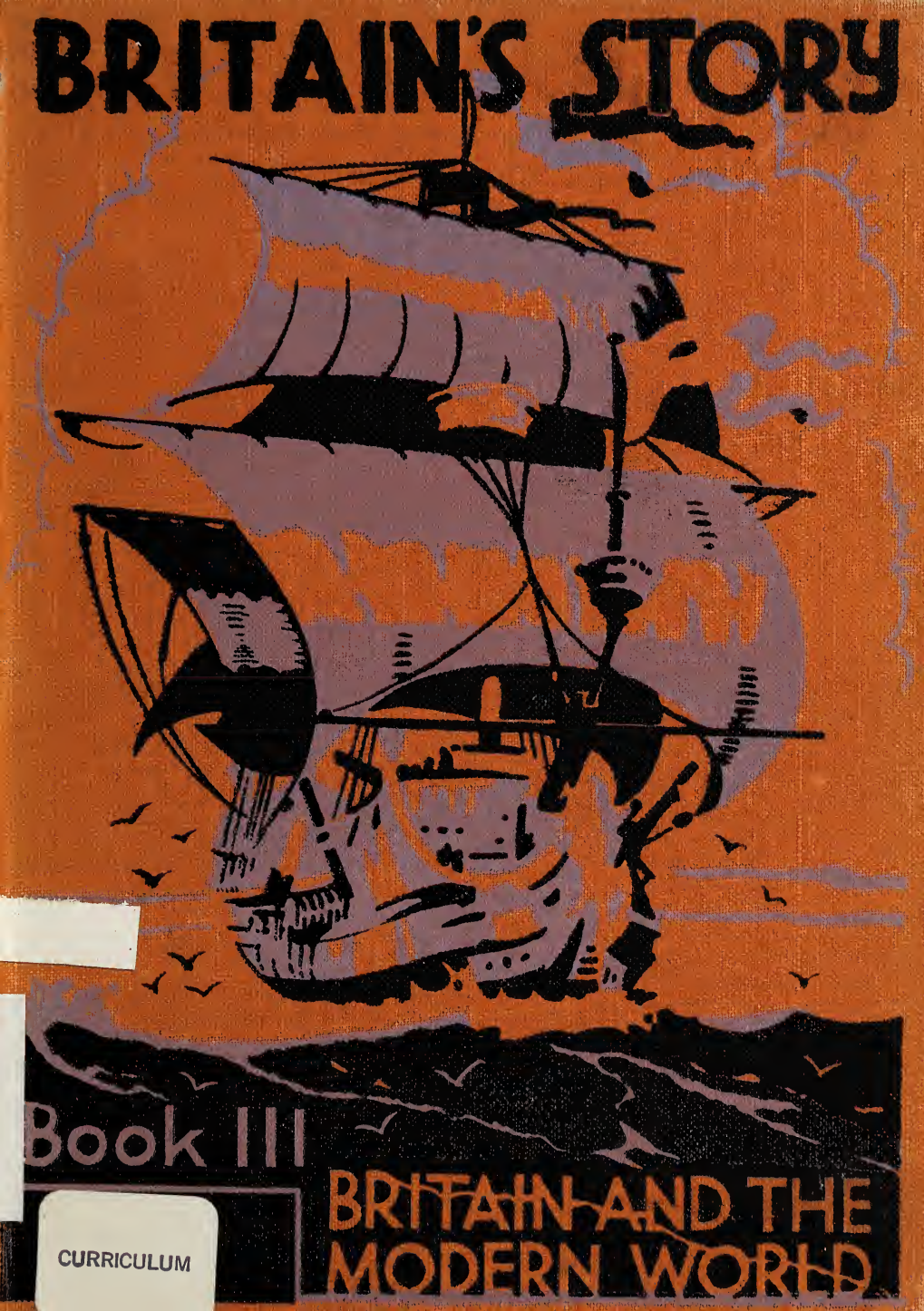
BRITAIN'S STORY



Book III

BRITAIN AND THE MODERN WORLD

HOUSES OF PARLIAMENT

BRITAIN'S STORY

A History for Seniors

BOOK III
BRITAIN AND THE MODERN WORLD

BY

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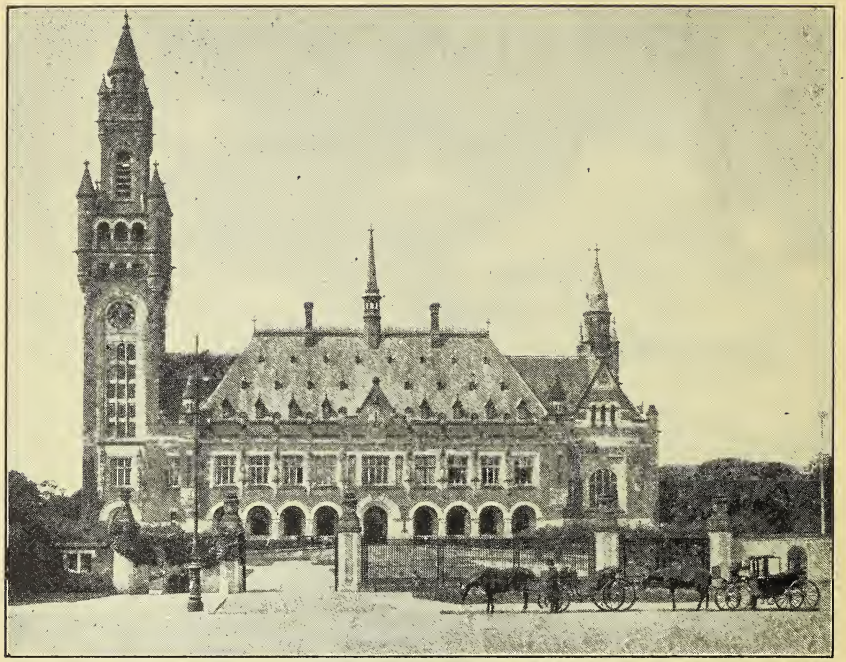

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BRITAIN'S STORY

BOOK III

BRITAIN AND THE MODERN WORLD

THE "CHRIST OF THE ANDES" PEACE MEMORIAL

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Introduction

To the Boys and Girls

I want you, boys and girls, to look on this book not as a history book to be studied, but as a story to be enjoyed. If your teacher insists on your learning some facts and dates we will collect those together *at the end*, but in the first place read this book as you would any other story. You remember best those stories you enjoy, don't you?

Some of you like one kind of story, some another. It may be you prefer stories of adventure in wild and lonely corners of the earth: or tales of fighting on land and sea; or romantic tales or quiet stories of homely everyday things. And probably you like these stories because you can imagine yourself as the hero or heroine you have been reading about. You would have acted just as splendidly had you been placed in the same position as the boy or girl you admire so much. But alas! You feel this can only be a dream, never will such wonderful opportunities and adventures come your way as those which fall to the lot of your story-book heroes.

Now that is where this book differs from the others, for it tells of real opportunities and real adventures which have fallen to the lot of men and women who started life just as you are about to start it.

For very soon now you will be men and women: you will be workers and you will be voters and as such you will have the fate of the world in your hands. Isn't that a wonderful thought?

A few years ago it was only in fairy tales that you read of ordinary boys and girls turning out to be great lords and ladies with tremendous power over the lives of other people, but now in this twentieth century it is a fairy tale no longer, but an ordinary everyday fact.

In a year or two, after leaving school, you will have great power in your hands—power to shape the world anew. That is a serious, as well as a thrilling thought. What will you do with that power?

These men and women you are going to read about —quite ordinary men and women like yourselves, have done great things: they have helped to make the world a better and a happier place to live in. But some of them have made grave mistakes and the result is that our poor old world is still in a terrible state. Now it is up to you to continue the good work of these older folks and to put right the mistakes they made. So with this idea in mind, and this vision to light you, read their stories again, remembering that even greater opportunities and adventures than theirs will come your way, and that in forty or fifty years time or even less, children will be reading about you and your deeds in their history books and praising or blaming you for the way you used the power these older folks placed in your hands.

PART I

Revolution

CHAPTER 1

The Bloodless Revolution

One fine day in 1688 a most extraordinary thing happened: a king of England, James II, ran away from his home, and in a fit of childish temper, threw his Great Seal into the river. Very quietly he slipped away and sailed for France, but he need not have troubled to keep his movements so secret for nobody was anxious to prevent him from going; in fact, most people were only too glad to get rid of him.

James II was the last of the Stuart kings—those kings who had caused so much trouble in England by declaring that they got their kingship direct from God, and so need not answer to anyone on earth for what they did. They claimed that by their "Divine Right" they were above the laws of the country and could do just as they pleased.

But now, Parliament declared, James had left the throne vacant. His daughter Mary had married William of Orange, so Parliament asked this Prince to be King of England. The people of England *made* William III their King, so he could not claim any "Divine Right," and if he ruled badly they could put him off the throne just as easily as they had put

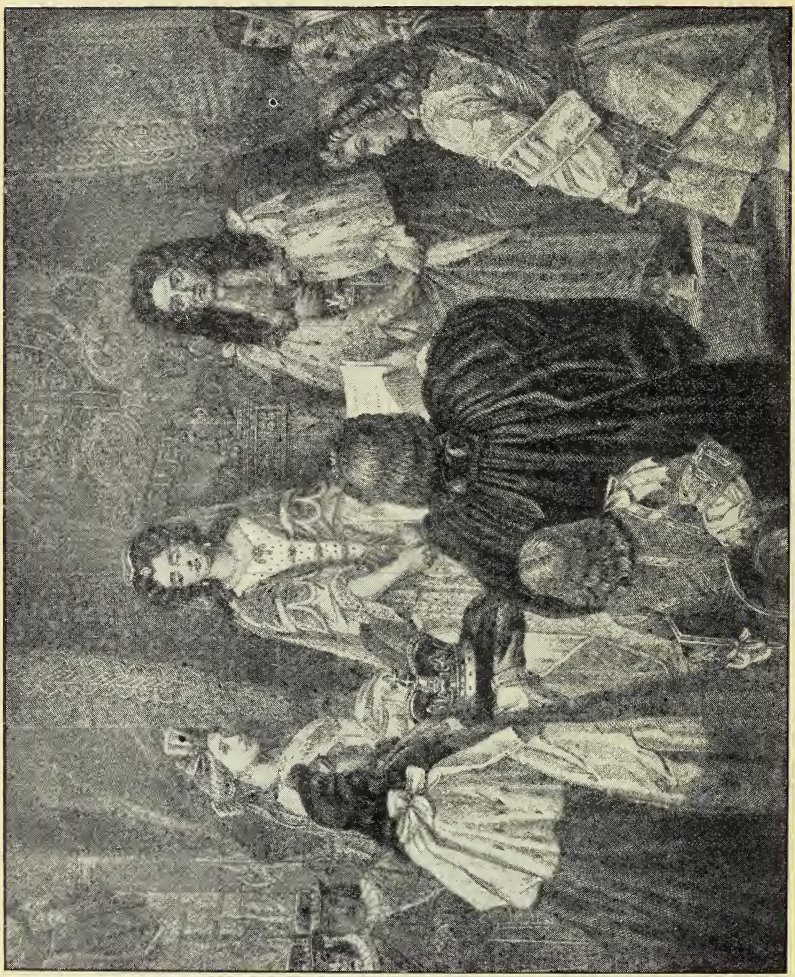
JAMES II, IN HIS PALACE AT WHITEHALL, RECEIVING THE NEWS OF THE LANDING OF THE PRINCE OF ORANGE, 1688

him on. The Bill of Rights which was made law soon afterwards stated clearly several things that a king might not do: among other things he might not levy taxes without the consent of Parliament, and only enough money was to be granted to carry on the government for one year. This meant that the king would be obliged to call a Parliament every year. He could not rule for several years without one, as Charles I had tried to do, because he would have no money with which to pay the army, the navy and all his servants of state.

All this was a great change from the state of affairs existing under the Tudors and Stuarts. It meant that the kings had lost nearly all their power and that, in future, the country would be ruled not so much by the king as by the Parliament.

This tremendous change had come about quickly, and so we call it a revolution, but unlike most revolutions it came about peacefully, and so it is called the Bloodless Revolution. It is true that James and his son and his grandson afterwards put up several fights, chiefly in Scotland and Ireland, to get back the throne, but the actual change of king and of the ideas underlying that change were brought about without any bloodshed.

Now there are some people who like to be constantly making changes, and there are others who prefer to leave things as they have always been. When the king had no longer the supreme power in the country, these two kinds of people began to disagree, and so two parties were formed. Those who wanted



CROWN OFFERED TO WILLIAM AND MARY

to go on making more and more changes were called Whigs. Those who wanted to keep things as they had been in the past were called Tories.

This was the beginning of "Party Government" of which we shall hear a good deal later on. Sometimes the majority of the Members of Parliament were Whigs, and then they tried to introduce more and more changes: sometimes the majority were Tories and they generally thought that the country was not ready for so many changes, and so they tried to keep things as they had been in the past.

Here we see another result of the Bloodless Revolution. In the past the Kings had always chosen their own Ministers, but now the party that was in the majority in Parliament appointed some of its own members to be Ministers, that is, the heads of the chief departments of the State, and these formed a kind of committee known as the Cabinet.

Shortly afterwards, George I became king. He was a German Prince and though descended from James I he could not speak English. So he did not attend the meetings of the Cabinet, and it was necessary to appoint one man to be the first or "Prime Minister." Thus the king lost more and more power which passed into the hands of Parliament and its Cabinet Ministers.

Walpole is generally considered to have been the first of our Prime Ministers. He was the head of the Government for nearly twenty-one years during the reigns of George I and George II and during most of that time he managed to keep England free from war and so gave her time to settle down and to develop along peaceful lines.

* * * * *

The government had passed out of the hands of the king and into the hands of a few ministers who represented not the whole people of England but chiefly the wealthy landowners and merchants. For the landowners controlled what were known as "Pocket Boroughs," that is villages or towns in which they owned all or nearly all the property, and where the tenants were obliged to send to Parliament the Member favoured by their landlord, rather than the one they favoured themselves. If they did not vote for their landlord's friend they were in danger of losing their work and of being turned out of their homes.

Then, too, there were "Rotten Boroughs." These were tiny villages, containing very few people, which had the right to send a member—again chosen by the landlord—to Parliament; but new towns which were growing up and housing thousands of people could not send a member to represent them.

These evils persisted for a good many years, waiting for the men who should be clever and strong enough to carry out further reforms.

* * * * *

Another important reform had its beginnings in the reign of William III. You will remember how during the last two hundred years people had become very bitter and angry if their neighbours did not worship in the same way as themselves.

For centuries there had been only one church in Western Europe, and that was the Church of Rome,

but Luther and others had "protested" against some of the practices of that church and had split away from it, thus forming the Protestant Church.

Our King, Henry VIII, did not agree with Luther and he wrote a book defending the Church of Rome. For doing this the Pope gave him the title "Fidei Defensor" which means "Defender of the Faith," and these Latin words you may still see on our pennies to-day though our Kings are no longer defenders of the Faith of Rome.

For, not long after he had been awarded the title, Henry VIII quarrelled with the Pope because he would not grant him a divorce. "In future," Henry said, "I will be the head of the Church in England: we will not have the Pope for our head"; but for a long time none of the teachings of the Roman Church were changed.

But when Henry died, his son Edward VI came to the throne. He was a keen Protestant and tried to make every one conform to his wishes, and he persecuted many of the Catholics who would not do so.

When his sister Mary came to the throne she was a Catholic and she persecuted the Protestants. Elizabeth formed a centre party, the Church of England, and she punished the Catholics on the one hand, and on the other those very strict Protestants who wanted to make still more changes, the Puritans.

And so it went on through the years, people getting more intolerant and bitter and angry with each other because they wished to worship differently, forgetting

that they all worshipped the same God, and that each one was trying to follow the truth as he saw it.

James II was a Catholic, and that was one of the reasons why so many people were glad to see him go. William III was a Protestant, and Parliament made it a law that, from that time onward, no Roman Catholic could become the King of England.

But shortly afterwards, in 1689, it passed a *Toleration Act*. By this Act, Puritans were allowed to worship as they liked, but they were not allowed to hold office. It brought no relief to the thousands of Roman Catholics in the country: they could neither take their services in public, nor could they hold any public positions in their town or in the country. So this Toleration Act did not go very far, but it was a beginning; as years went by further reliefs were granted to all religious parties. But this kindly and friendly tolerance of other people's opinions has, as we shall see, grown but very slowly through the long years—and it is this intolerance, which is generally the result of ignorance, which leads in its turn to war and unrest and trouble of all kinds. One of the chief things which the study of history teaches us is, that while it is necessary for us to have opinions of our own, and to stand firmly by them, it is equally necessary for us to respect the opinions of other people.

QUESTIONS

1 What do you understand by the "Divine Right of Kings?"
2 Why could William III not claim this right?
3 What do you mean by the "Bloodless Revolution?"

CHAPTER 2

The Agricultural Revolution

Part I

Had William the Conqueror or Julius Cæsar, or even Socrates from the far-off days of ancient Greece, come back to this world at the beginning of the 18th century, he would have found very little to surprise him. Through all these eighteen or twenty centuries things had improved of course — ships were bigger, houses were more comfortable and better furnished than they had been since Roman times—but except for the Printing Press, the visitor from a past age would have found little or nothing that was quite new to him. Had he come back at the beginning of the twentieth century he would have rubbed his eyes in astonishment, and have thought himself in a dream-world full of all kinds of impossible marvels. For the changes brought about by the discoveries and inventions of the nineteenth and twentieth centuries were far greater than those of all the twenty centuries which preceded them.

Had George II travelled around the country districts of England in 1734 he would have found the farmers living and working very much as they had done when

William I drew up his Doomsday Book nearly seven hundred years before.

He would have found them using much the same type of plough with two wheels and one handle. Their scythes and harrows had not altered very much and they still sowed their seed in the same old way, threshed their corn with a hand flail and ground it into flour at the water-mill or wind-mill owned by their landlord.

A few changes had occurred. There were no longer "villeins" or "churls" who worked on their lord's land in return for their own little patch. This practice had gradually died down and the peasants were now paid for their labour while the tenant farmers paid a money rent for their lands.

But could George II come back to earth in 1934 and visit the countryside that we know so well with his successor George V, he would be vastly surprised at the changes he would see all around him. Things which to us are the commonplaces of everyday life would be to him marvels and miracles. That wonderful machine that cuts and binds the corn, the still more wonderful one which threshes it, the drill, the motor plough, even the little fields with their trim hedgerows and the fine fat cattle and sheep would seem to him too wonderful to be true.

Let us see how all these changes have come about in such a short time, for it is well for us not to lose our spirit of wonder and amaze: we are so familiar with our surroundings that we take them all for granted

and are apt to forget in what a wonderful world and wonderful age we live.

* * * * *

Now, as we have seen, after the terrible plague known as the Black Death which swept over England in 1348, labourers were so scarce that they were able to demand higher wages, and it seemed as though they were going to have a prosperous time, but soon afterwards, as there was a growing demand for English wool, the landowners turned a good deal of their land into pasture for sheep, and this threw a great many labourers out of work, for fewer men were required for sheep farming than for cultivating the land.

This sheep-farming meant also that the land had to be enclosed, for it was necessary to keep the sheep from straying into the arable land, and so about this time hedges and fences first made their appearance, but they were not yet very freely used.

All the land lying round the village was still divided into three big fields as it had been since earliest days—this was the arable or ploughed land. Outside this and fenced off from it were the large fields and commons on which the sheep and cattle grazed. On the approach of winter, as the pasturage became poor, a great number of the animals were killed because there was not sufficient food to feed them during the winter. The flesh was salted so that it would keep fairly well, and the only meat people could get during the winter months was this salted meat. This was one reason why in

Tudor and Stuart days they were so fond of the spices which came from the East—the pepper, cinnamon, cloves, etc., served to hide the saltiness and taintness and gave a little flavour to the pork and beef and mutton which had been kept in brine through the long winter months.

Now the arable land, as we have seen, was divided into three big fields. On the first one wheat was grown, on the second barley or rye, and the third was lying fallow, that is, lying idle with nothing growing on it, for farmers thought the sun and the wind and the rain would restore to it something of the food which the growing crops had taken from it the two previous years. Next year the first field would be lying fallow, and then the second field, and so on; each field lying idle once in three years.

Each farmer in the village worked a certain number of strips in each of these fields and his strips did not always lie together; one might be at one side of the field, and another right at the opposite side: they were not fenced off in any way from his neighbours' strips, so it was very difficult to try out any new crops, and this was one of the reasons why so little progress was made in agriculture during all these hundreds of years.

But at the beginning of the eighteenth century men's minds were becoming more keen and alert and they were anxious to try out new ideas and new plans. Also the population of the country was rapidly increasing, so it was necessary to provide more food

if numbers of people were not to starve. So by degrees the more energetic and thoughtful farmers bought up their neighbours' strips or made other arrangements by means of which they could have a large plot of land in one place. They enclosed this with a fence or hedge and then they were able to try experiments.

* * * * *

One of the first of these reforming farmers was a young man named Jethro Tull. He was a clever youth; after his school days were over he went to the University at Oxford as he intended to become a lawyer and then a politician. But he was not very strong and though he struggled hard against his ill-health, after a time his doctors ordered him to give up his college and his studies and go into the country where he could lead an open air life. This was a terrible blow for young Tull, for it meant the end of all his ambitions, and the thought of living all his life in the heart of the country was very distasteful to him, for in those days the country was much more lonely and isolated than it is now.

But he was not the sort of youth who wasted his time in idle longings and vain regrets. He went to live at Howberry Farm near Wallingford and as soon as he got a bit stronger he began to look about him and found that life in the country could be every bit as interesting as life in a town.

As he went for his walks in the early spring he noticed the sowers walking up and down the fields.

Each one had a basket full of seeds under his arm or hanging round his neck, and as he walked he took hands full of seed and scattered them right and left.

"Just in the same way as the sower our Lord Jesus saw in Palestine nearly eighteen hundred years ago," thought Jethro Tull. "How wasteful this method is our Lord pointed out: some seed fell in the hedge-side and was choked by the weeds, other seed fell on the hard path and was picked up by the birds, even that which fell on the good ground fell unevenly, some of it too far apart, and some of it so crowded that it had no room to grow properly. Is it not strange," thought the young man, "that seeing how wasteful this is, no one should have tried to improve on it during all these years?"

Tull set his wits to work. All his earlier life had been spent in studying quite different things, but a well-trained mind can turn to any problem, so Tull turned his attention to this question of sowing seed, and wondered if it would not be possible to invent a machine which would do it better and quicker than it was done at present, and which would keep the seed in straight rows so that the weeds which now almost choked the crops could be easily and quickly cleared away.

He did not know much about machinery but at last he got an idea for what he wanted from a most unlikely place—from the soundboard of an organ. He experimented with this idea till at last, about 1701, he was able to produce the first drill.

This drill was like a large box hanging between

two wheels, and was generally drawn by a horse. Little iron tubes ran down from the box and these scraped furrows in the soil and dropped seeds evenly into the furrow, while at the back a small rake was fitted and this drew the soil lightly over the seeds as the new machine was drawn along.

Quite a wonderful invention this, and Tull was very proud of it. " It makes the channels, sows the seeds into them and covers them at the same time with great exactness and precisions " he wrote in a book on " Horse Hoeing Husbandry," which he soon afterwards published. There had been very little hoeing and weeding before this time, but Tull tried to show how necessary both these processes were if good crops were to be grown.

By this time he had become very interested in farming and he moved to a bigger place where he could make more and more experiments. For his health's sake he had to go to the South of France for a time, and while there he studied French methods of farming and so gained some new ideas which he was able to put into practice when he returned to England.

He had introduced hoeing for dry land, he now sought to improve heavy, wet land by a new system of drainage.

In this type of land he dug narrow trenches two or three feet deep, and partly filled these with stones and twigs which were then covered with soil. After heavy rains a good deal of the water filtered away through these loose stones into ditches and streams

and so the heavy, clay soils were not so waterlogged as they had been before.

In these and several other ways he improved his own land and showed intelligent landowners and farmers how to do the same. His work paved the way for other important changes and inventions which quickly followed, so to-day we owe a deep debt of gratitude to Jethro Tull, one of the earliest pioneers of agricultural reform.

QUESTIONS

1 Describe the arrangement of farm land in Tudor and Stuart days.

2 Why was this wasteful?

3 Describe the work of Jethro Tull.

CHAPTER 3

The Agricultural Revolution

Part II

Another pioneer was Charles Viscount Townshend, whose nickname "Turnip" Townshend reminds us of the great change he introduced.

Townshend was a brother-in-law of the famous minister, Sir Robert Walpole, and he himself was in Parliament for a time, but he soon gave up politics and turned his attention to farming.

As we have seen, it was the custom at this time to leave one of the great open fields idle or fallow, every year. Townshend thought what a terrible waste this was, and wondered if nothing could be done to prevent it. He travelled in Germany for a time, taking an interest in everything he saw, and asking questions. From the Germans he learnt the value of the turnip, and when he returned to England he began sowing this and other root crops on his land.

Now the humble turnip had two advantages; it took from the soil quite different food from that taken from it by wheat and barley, so it could be grown on the land which had hitherto been allowed to lie fallow, without making that land any poorer. As well as this, the turnip provided a valuable winter food for cattle and sheep, so more of these animals could be kept alive during the winter instead of being killed and salted.

We can guess how keen Townshend was on his new idea for him to get the nickname "Turnip." He must have talked and written about his turnips on every possible occasion until he had persuaded many other farmers of the value of this change.

He learnt that different plants took different foods from the soil so he worked out a "rotation of crops" by means of which the land could be used all the time and yet not be made too poor. The first year he grew turnips on his ploughed land, the second year barley, and the third year clover or rye grass, the fourth year wheat, then back to turnips again; so all the land could be used every year instead of only two-thirds of

AN ENGLISH PLOUGH OF THE NORMAN PERIOD

it, and this, together with Tull's method of weeding and hoeing, and Tull's drill, made it possible to produce far more food than had previously been the case, and very greatly increased the value of the land.

* * * * *

Another man who was experimenting on rather different lines was Robert Bakewell, the son of a farmer at Dishley. He was tired of seeing the poor, scraggy cattle and sheep about his father's farm, and when he grew up he set about trying to improve them.

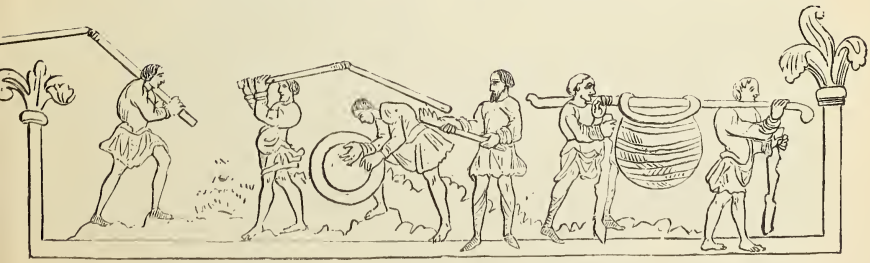
First of all he had to enclose his fields and separate his cattle and sheep from those of his less careful neighbours. He saw, too, that his beasts were kindly treated and cleanly housed, and then by a careful study of the various foods he found out what would fatten them best, in the parts he wanted fattening. "You can get beasts to weigh where you want them to weigh, that's in the roasting not the boiling parts," he said.

Of course, to a man experimenting like this, the introduction of the turnip as a winter food was a great help, and before long he had produced a fine breed of sheep known as the "Leicestershire" sheep, which

farmers all over the country were soon very pleased to have on their farms, and instead of the scraggy cows of his early days, he soon had on his fields "a small, clean-boned, round, short-carcassed, kindly looking cattle, inclined to be fat."

Their fame soon spread and people came from far and near to see Bakewell's model farm with its light, airy shippens, its clean stables and pens, its fat, prosperous looking cattle, and its well-managed fields and dairies. He formed the Dishley Society, the members of which studied his ideas and experiments and put them into practice on their own farms so that very soon the cattle and sheep all over England were greatly improved and almost doubled in weight.

Bakewell himself gained little or no wealth from his labour and his ideas. Experiments always cost a great deal of money and Bakewell also spent a great deal in entertaining the crowds of people who came to see his farm, so that, unfortunately, he went bankrupt. But he had done a great work for his country. The farmers who followed his methods became more prosperous and were able to make still



THRESHING WITH FLAILS: EARLY ENGLISH

THE HORSE PLOUGH GIVES A SINGLE FURROW

further improvements, and everybody benefited by the production of more and better food. The animals too, benefited by the more decent treatment which they received from those who followed in Bakewell's footsteps.

* * * * *

Another famous farmer of this period was Squire Coke of Holkham. When his father died and he came into possession of the estate he found it in a miserable condition, undrained, unenclosed and very poorly cultivated, while the few sheep and cattle were of a

very poor type. He was only a young man without any knowledge of farming, but he had travelled a good deal with open eyes and mind, and he had seen something of the way in which farming had improved during the last fifty years, so he determined that his land should be improved too.

Now many country people in those days did not like to try anything new—what had been good enough for their fathers and grandfathers was good enough for them. Squire Coke's tenants were like that, and when he told them that they were so poor because their methods were all wrong and they were behind the times, they stared helplessly, and when he said he

THE MOTOR PLOUGH GIVES MANY FURROWS

would take over their farms and show them how to make the land pay, they shrugged their shoulders and smiled and waited for the moment to come when the young squire would have to acknowledge that he had failed.

But he did not fail. He enclosed the land, had it drained and hoed, flooded it where it was too dry, manured it where it was too light, introduced the drill, and before long was growing as good wheat as anyone, on land which, the old folk had said, would not grow wheat at all.

He sought out the best breeds of cattle and sheep and introduced them on to his land. He realised the importance of having good hay as well as turnips for winter feeding, and he planted trees on those parts of his estate which were too hilly for the plough.

In all these ways he increased the value of his estate tenfold, and his tenants prospered too, for he helped them in every way, sharing with them all his improvements and lending them horses and machinery.

What Coke was doing on a large scale, other people were doing on a smaller one. The farmers and landowners used to meet at different times—at one sheep shearing Coke has as many as 7,000 guests—and they discussed for days the various ways in which they could improve their land, their crops and their cattle. This great interest in farming resulted, in 1793, in the formation of the Board of Agriculture which collected information and gave advice to farmers, offered prizes for successful experiments and inventions, and

encouraged intelligent farming in every way possible.

The first and most difficult steps had been taken by Tull and Bakewell, Townshend and Coke : by the end of the 18th century progress was rapid and continuous.

A plough-drill which would make the seed bed and sow at the same time was invented about 1781, while during the next twenty years the harrow, the reaper, the haymaker and the threshing machine, were all invented. Tremendous progress, when we remember that for hundreds, nay, thousands of years reaping, haymaking and threshing had all been done by hand.

The discovery of the power of steam in the next century helped still further the development of agricultural machinery, so that soon it was a common sight to see a huge plough turning eighteen or twenty furrows, drawn by a traction engine. But what a marvel when it first appeared !

And now, at harvest time the reaper and self-binder soon clear the field, while a little later, the almost uncanny threshing machine does in a few days, work which used to occupy the whole winter, when threshing was done with the hand flail.

Wonderful machines, doing the work of dozens and dozens of men ! Is it a good thing, do you think, all this increase of machinery, even in the quiet of the country side ? Perhaps. It means that man has no longer to labour every hour of his waking days and it gives him—we hope—leisure in which to develop his higher powers.

CUTTING AND BINDING WHEAT WITH A TRACTOR

But that is one of the questions you can think out and decide for yourself, both as you read this book and as you go about your everyday life, with ears and eyes and minds open and alert.

QUESTIONS

1 What do you mean by Rotation of Crops? Who introduced the idea?

2 What advantage had this?

3 What did Bakewell and Coke do for agriculture?

4 Compare the (*a*) ploughing, (*b*) sowing, (*c*) threshing of to-day with that of two hundred years ago.

CHAPTER 4

The Industrial Revolution

Part I

It was not only in farming that tremendous changes were taking place during this last century. Had William I returned to the earth in George II's reign he would have found an England, both in town and country, very similar to the one he had known six hundred years before, but if he returned now, in George V's reign he would hardly recognise his old England. Where forests of fine trees once stretched he would now see forests of tall chimneys. Small villages have become great towns. And the life in those towns! So utterly different from anything either he or George II could have dreamed of! And the change has come about so quickly, for in the story of our old earth, a hundred years is a very short space of time. Let us see why the face of our country has changed so rapidly during the last century.

* * * * *

Long, long years ago, when man was working his way upwards towards the light of civilisation, one of the first things he taught himself to do was to weave. At first he only wove baskets from twigs and reeds, but before long he was weaving cloth; very, very clever were the first men who discovered how to do this.

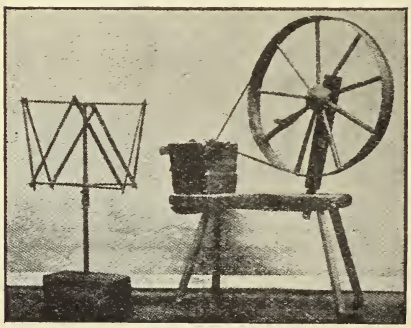
At first the cloth was very coarse, but gradually it

improved, and even five thousand years ago the Egyptians and Babylonians were making beautiful linen, while two thousand years ago the Greeks and Romans were making material of wool and linen quite as soft and fine as anything we can make to-day with all our wonderful machinery.

The people of Britain did not advance so quickly as the peoples of the warmer south, but even they were making a woollen cloth long before Julius Cæsar visited them in B.C.55, and for seventeen hundred years they continued to make woollen cloth in their own homes in much the same way as they had done it in those very early days.

The wool came from the sheep's back, dirty and greasy, so first it had to be scoured, and here quite small children could help. The wool was put into tubs of hot water and the children stamped about in it until the dirt was squeezed out.

The clean wool had then to be "carded," that is, straightened out and freed from knots and tangles; this was sometimes done in early days by pulling it over a board full of nails: later wire brushes were used. When this was finished it was time to begin "spinning."



A SPINNING WHEEL

The fibres of wool were loosely bound to the end of a short stick called a "distaff." A few of the fibres were also fastened on to a spindle, which was left swinging and perhaps weighted down with a stone. The worker might hold the distaff in his left hand or push it into his belt so that he would have both hands free. He then gently drew out the fibres from the distaff and the rotating of the spindle twisted, that is "spun" them into thread or "yarn" which was then wrapped round the spindle.

Some one improved on this by mounting the spindle and fastening it to a wheel, and so the spinning wheel was invented, and for hundreds of years one of these was found in nearly every home, whether cottage or castle.

When the wool had been carded and spun it had next to be woven into cloth on a hand-loom which remained practically unchanged for centuries.

One set of threads called the warp was placed close together on the weaving frame and at one end alternate threads were fastened to two rods which could be raised and lowered. The weft thread, which was attached to a shuttle, was passed over one set of threads

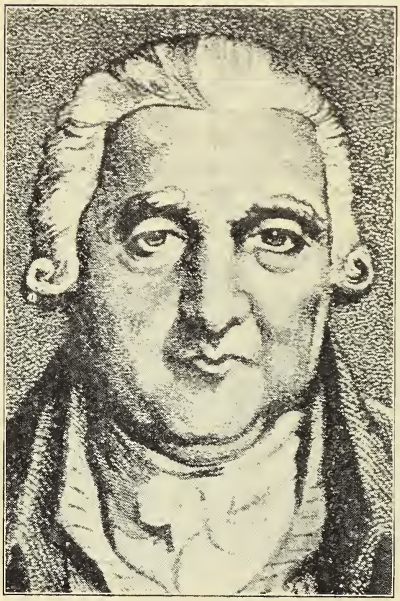
AN OLD HAND-LOOM

and under the other set: the under set of threads was then raised to become the top set, and the weft passed back again, and so on under and over, under and over, row after row: after every few rows the weft had to be "beaten" or combed down until the threads lay very close together.

From earliest days until the middle of the eighteenth century this was the method used for the weaving of all cloth, whether fine or coarse. It was a very slow method but beautiful materials could be produced by good workers.

* * * * *

For a long time the best woollen cloth was made



SIR RICHARD ARKWRIGHT

in Flanders, but Edward III invited some Flemish weavers to settle in England to teach the English people their method of working, so that by the time Henry VIII came to the throne England was famous for the good woollen cloth her weavers produced.

Then raw cotton was brought into England for the first time during the Tudor period.

At first the spinners could not make a very strong thread with this new material, but the people of Lancashire soon found that they could make a good cloth with a woollen thread for warp and a cotton thread for weft.

As the years went by the demand for English cloth became so great that the workers in their cottages and sheds could not spin and weave quickly enough to supply all that was wanted. So some of the workers, more thoughtful and far seeing than the others, began to experiment to see if they could not speed up the manufacture of the cloth.

* * * * *

The first man to make any great improvement in the looms was John Kay who was born near Bury in Lancashire.

We have seen that after every few passages of the shuttle the weaver had to stop to beat down his weft threads with a comb or "reed." Kay fixed *his* shuttle on to a string fastened to two levers so that a jerk of the string sent the shuttle flying across the loom in either direction. The worker could thus flick the shuttle in

both directions with one hand while the other hand was free to beat down the thread without stopping the movement of the shuttle.

Kay's "flying shuttle," which he invented about 1728, not only speeded up the work but made it possible to weave a wider cloth, for when a man had to throw the shuttle from hand to hand he could only weave a material as wide as he could stretch.

But Kay's fellow workmen did not like his new invention. "If this machine helps a man to turn out twice as much work in a day, it is doing another man out of a job," they argued. They did not realise that if the work was done quicker it could be sold cheaper; if it was sold cheaper more would be bought, and so there would be more work, rather than less.

They could not understand this, so they broke into Kay's house and destroyed the hated machine. And in their blind anger they burnt and broke up everything in the house.

Disheartened and disgusted, Kay left his ruined home and went to France. He died there shortly afterwards a very poor man, but his son Robert went on with his experiments and in 1760 he invented the "drop box"—this was a new type of shuttle which made it possible to weave a material with different coloured weft threads.

Thus the weaving was speeded up a little and improved, but the spinning remained very slow. Roughly speaking it took twenty spinners all their time to keep one weaver supplied with yarn.

QUESTIONS

1 Describe the processes of spinning and weaving in early days.

2 What improvement did John Kay introduce?

CHAPTER 5

The Industrial Revolution

Part II

James Hargreaves was a poor workman, living in a little cottage near Blackburn. His wife, after attending to their little home, spent all the rest of the day at her spinning wheel, but however hard she worked she could not keep her husband supplied with yarn. Sometimes he bought yarn from other spinners, so that his weaving loom would not be standing idle, and sometimes he got work as a carpenter.

One day in 1764 Mrs. Hargreaves upset her spinning wheel. She was very cross about it, but when her husband saw that the spindle still went on turning though it was no longer upright, he got a new idea. Why not fix more spindles to the same wheel?

He had some skill as a carpenter, so at night time, while his neighbours slept, he put together a frame on which were eight spindles. All these could be turned with one wheel, so he was now able to spin eight threads while other people were spinning one.

He called his new machine the spinning "jenny" after his wife, and for a long time he kept it secret. But after a while his neighbours discovered that he was producing more yarn than they did, and they guessed that he had one of the hated "engines."

Night after night they gathered in front of his little cottage shouting and throwing stones. Then one night, in their wild rage, they broke into the house and smashed up the poor jenny, threatening Hargreaves and his wife so that they had to flee from the village.

They moved to Nottingham where Hargreaves made another jenny and started to spin yarn for the stocking manufacturers of that district, and he kept improving his machine until he could work thirty spindles with one wheel. Some years later the number of spindles was increased to a hundred and twenty.

* * * * *

Richard Arkwright was the youngest of a family of thirteen. His family was very poor, so Dick had to start work when he was very young. He was quite small when he earned a few pence each week, working for a barber, and he was still very young when he set up business on his own account, shaving men for a penny in an underground cellar.

Naturally this did not bring him in much money, nor did it keep him very busy. Dick could neither read nor write, but he was intelligent and he kept his ears and eyes open. He knew that most fine gentlemen of his day wore wigs, so he determined

to learn wig-making in his spare time. He made such a success of this that he soon gave up his shaving and became a wig-maker.

At certain times of the year he would visit various fairs where girls were waiting to be engaged as servants or farm workers. Many of these girls were willing to sell their long hair, and this was what Arkwright was anxious to buy to make up into wigs for fashionable folk.

During one of his journeys Arkwright found himself stranded, late one night, in a little village near Blackburn. A storm was coming on so he knocked at the door of the only house still showing a light. For a time no one answered but he kept on knocking, and at last a frightened-looking man opened the door a little and looked at him anxiously. Evidently satisfied that this was no enemy he let him come in, and Arkwright saw in the little room something covered over with a sheet.

Interested and curious, Arkwright got his host to talk and he soon learnt that he was in the cottage of Hargreaves and that under the sheet was his new spinning-jenny. Soon the inventor was telling his visitor all about the machine: how quick it was, but how the thread it produced was only strong enough for the warp, not for the weft.

When Arkwright left the next day he could think about nothing but the new machine. He saw its great possibilities and he saw its faults. Could he improve on it? He determined to have a good try.

For the next few years he observed and experimented and made model after model, using up all his spare cash and neglecting his wig-making, until he became quite poor again.

His wife was so angry at what she considered his waste of time and money that one day she broke up all his models, but even this did not check his keenness. He got permission to use a room belonging to the Preston Grammar School for his experiments, and here he and an assistant worked on larger models, but so secretly that the neighbours began to think they were practising some kind of witchcraft and that the strange noises they occasionally heard were made " by the devil playing his bagpipes."

One day Arkwright visited an iron foundry and there he saw a red hot iron bar being rolled between heavy rollers and coming out as a long thin rod. Here was another idea. Could he not use some such method as this for the spinning of his cotton thread?

Back to his workshop he hurried. Plans were followed by models; models by a full size machine, which to the great delight of its inventor worked, and worked well.

He had set up on a frame two sets of rollers, something like the rollers of a wringing machine. The upper one of each set was covered with leather, while the lower one was made of finely grooved steel. Through these rollers he passed the fibres of cotton which were thus stretched and made smooth and of even thickness before they passed on to the spindles to be

spun into thread. To Arkwright's delight he found that the yarn produced by his new machine was both smoother and stronger than that spun on Hargreaves' jenny.

When Arkwright had proved that his machine was a success, he went into partnership with some stocking manufacturers who built a mill where a number of these machines could be set up and worked, not by hand but by water-power.

He soon became a wealthy man but he still worked sixteen hours a day and all his life he had many difficulties to face. Workmen often tried to break his machines as they had done those of Kay and Hargreaves; one of his mills containing a number of machines, was completely wrecked—manufacturers tried to steal his ideas. But he kept on working and improving his spinning frames and when he was forty-five years of age he was knighted by his King, George III, for his inventions had given Britain a good start in the race for industrial prosperity.

* * * * *

Meanwhile there was growing up near Bolton another poor lad who was to make great improvements on Arkwright's good machine. This was Samuel Crompton who lived with his widowed mother in an old, half-ruined house called Hall-in-the-Wood.

Mother and son worked hard together. They grew their chief food, oats and potatoes, in the field behind their house, and the mother spent long hours

with her spinning wheel, spinning the thread which Samuel wove into calico on his hand-loom.

Samuel was a shy, dreamy youth and fond of books: after his hard day's work at the loom was over, he tramped into Bolton to attend the night-school there and he became quite clever, particularly at mathematics.

Soon they saved up enough money to buy one of Hargreaves' spinning jennies, and now Mrs. Crompton could spin very much more thread for Samuel to weave.

But as the boy grew to manhood he became dissatisfied with the calico he was weaving: it was rough and coarse because the threads kept breaking and had to be joined. He began to wonder if he could not improve on the jenny.

He had seen one of Arkwright's machines so his idea was to combine Arkwright's rollers for drawing out and smoothing the threads, with Hargreave's jenny for twisting them.

He set to work, and bit by bit he made his machine, hiding it up in the attic for fear of angry neighbours. His mathematics helped him a great deal, and he earned money to buy materials by playing a violin in the orchestra of the theatre.

At last the pieces were finished and fitted together. How anxious were mother and son to see if the new machine would work! How delighted they were to find that it worked beautifully!

Crompton tried to keep his secret but people soon discovered that his yarn was the best in the country,

and other spinners came to his house to see how he made it. He was too poor to patent his invention so he allowed other men to copy his machine. They promised to pay him well, but all they gave him was £60, while they made thousands and thousands of pounds by setting up his "spinning mule" in big factories. The thread it spun was so fine and yet so strong that it was possible to start the manufacture of delicate muslins for which there was a great demand at that time.

All these improvements had been made in the spinning machines. Some years passed before Dr. Cartwright, a clergyman, invented a loom which could be worked by water-power. But it was a very crude affair and it was not until about 1820 that any great improvement was made in the weaving sheds.

QUESTIONS

1 Name the three great inventors of spinning machinery, and say what their inventions were.

2 Write an interesting "Life" of one of these inventors.

3 Who invented the first power loom?

CHAPTER 6

The Industrial Revolution

Part III—The Steam Age

Most of these inventions and improvements were made in the cotton industry in Lancashire, but it was not long before other trades were making similar machinery to speed up their own productions. All these machines were labour-saving, but if they were to be really effective they had to have some power behind them other than man-power.

Water was found very useful. By the aid of water-wheels numbers of machines could be worked at once, and so most of the early factories were built near rivers. But swiftly flowing streams were not to be found everywhere and as the demand for these manufactured goods became greater, men began to look around for some other power to drive their machinery.

Now as one might expect, the early Greeks who were so wise and clever, had discovered the power of steam, two thousand years ago. Hero, a Greek of Alexandria had made small models of engines which could be worked by steam as long ago as 130 B.C. But his discovery was never followed up, probably because no coal and very little iron was found in ancient Greece.

It was not until the seventeenth century that men

began again to experiment with steam, and to discover the tremendous force which it possessed. Then a man named Savery invented a steam-driven engine for pumping water from the tin and lead mines of Cornwall. This " fire engine " as he called it, was a very clumsy affair, but in 1705 a Dartmouth blacksmith named Newcomen, improved upon it by introducing a piston. It was still very wasteful and as the cotton machinery had not been invented there was not much demand for it, so the steam engine did not become popular and little improvement was made until James Watt became interested in it some fifty years later.

James Watt, who lived at Greenock, was a rather delicate boy but he was clever with his fingers and very good at mathematics, so as he grew up he decided to become a maker of mathematical instruments. This was a business which required the most careful work and the greatest accuracy of hand, eye and brain.

To master this difficult craft Watt was sent to London, a journey which took twelve days on horseback. In a year he felt that he had learnt all that the London makers could teach him, so he returned to Glasgow and set up business for himself near the University, where he was soon well known to professors and students.

One of Newcomen's engines was in use near Glasgow, but it was constantly going wrong. On one occasion, when it broke down, James Watt was called in to repair it. He soon put it right, but his interest was aroused. He saw the weaknesses of the machine

WATT DISCOVERING THE CONDENSATION OF STEAM

and wondered if he could not produce a better one.

The first problem was how to prevent the great waste of steam which took place in Newcomen's engine. Watt made a model and for a long time puzzled over the question, and then quite suddenly the answer to the problem dawned on him. There must be a separate chamber in which the escaping steam could condense so that it did not cool the cylinder.

Watt worked out this idea on his model and found that it acted beautifully, but it was some time before he could find an iron works where the big machine could be made up accurately enough. Pistons and cylinders were crudely made and did not fit accurately. But by degrees the workmen became more skilful and by 1776, the year of the American Declaration of Independence, Watt's steam engine was proving a really successful invention.

During the following years Watt, his assistant Murdoch, and the iron-workers of Boultons, who worked out his plans, made many improvements and produced engines which could be used for many purposes. In 1786 one was introduced into a big flour mill, and by 1790 Arkwright was using them in his cotton spinning factory in Nottingham.

WATT'S STEAM ENGINE

During the same busy years other men were working to improve the iron which was now so badly needed. Until this time all iron smelting had been done by the aid of charcoal, and a great number of trees had to be cut down to keep the small furnaces supplied.

But about this time when the demand for iron was so great, some men discovered that they could use coke instead of charcoal. So the iron smelting industry gradually moved from the well-wooded districts, such as Sussex, to districts in the North and the Midlands, where coal was plentiful, and the improvements in the refining of iron and the making of steel came just in time to help Watt and his partners make a success of the steam engine.

* * * * *

So at last steam was recognised as one of the greatest forces in the world. When man's skill was combined with the power of steam there was no limit to the goods which could be quickly and cheaply produced. And it was in England that all these new inventions had been made. While Europe had been torn by the War of the Austrian Succession and the Seven Years' War ; while our Empire had been growing overseas and America had been struggling for her independence, Englishmen at home had been quietly going on with their work. With the aid of all this new machinery they produced things so much quicker and cheaper than before, that England became the workshop of the world. Other nations were glad to buy from her,

and so her trade and the wealth which trade brings, increased enormously.

It was very largely this start in the race for manufactures and trade which gave England the prosperity which made her able to withstand the ambitions of Napoleon and to maintain her freedom when all Europe was arrayed against her. Even Napoleon at one time was obliged to buy clothes for his men from England, his bitterest enemy.

QUESTIONS

1 Give an account of the work of James Watt.

2 How did his work and the inventions mentioned in the last chapter help England?

CHAPTER 7

The Transport Revolution

Part I—Canals and Roads

The introduction of all this machinery made it necessary to find some means of improving transport, for the roads were still little better than the old pack roads over which Shakespeare had journeyed in his day. Over such roads as these it was slow, difficult work to carry such heavy things as coal and iron, or building materials and machinery for the new factories.

The Duke of Bridgewater owned a coal mine at

Worsley, but the factories that needed the coal were at Manchester, ten miles away, so it had to be carried all those miles along a rough road, in panniers slung over the backs of mules and horses. The Duke realised what a terribly slow method this was and at last he sent for a young engineer named Brindley and talked over with him the question of constructing a canal.

This James Brindley was born in 1716, the son of a poor Derbyshire labourer who was more interested in bear-baiting and cock-fighting than in looking after his family.

James never had a chance to go to school and was working as a farm labourer at a very early age. But his mother thought the boy was capable of better things and when he was about seventeen, she apprenticed him to an engineer in Macclesfield.

Here he proved himself very clever with machinery and soon became one of the heads of the firm; he had also shown some skill as a surveyor when the Duke of Bridgewater consulted him about his canal. Brindley had already cut short stretches of canal to allow small barges to pass from one river to another, but this Bridgewater Canal was a much more difficult problem, owing to the hilly nature of the land.

Undaunted, Brindley pushed on with the work, showing real genius in overcoming the obstacles. He carried his water through the hills, over the bogs, and even over the River Irwell, in a manner entirely his own. When at last it was finished, the canal was a complete success and coal which had previously cost a

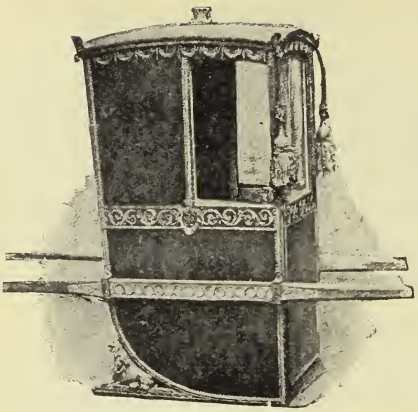
shilling a hundredweight in Manchester, could now be sold for fourpence.

The success of this canal caused it to be quickly followed by others. Brindley was now a famous and busy man and in ten years, between 1762 and 1772 he constructed over 360 miles of water-way, which helped considerably to solve the difficulties of transport, not only for coal and other raw materials but for the finished articles as well.

* * * * *

Brindley's work was carried on by John Smeaton who was born in Leeds about 1724. He became a famous engineer whose first great work was the construction of a new Eddystone Lighthouse to replace the one destroyed in a storm. Soon afterwards he was building bridges and cutting canals, among them the important Forth and Clyde Canal, and soon a network of nearly three thousand miles of canals spread over Britain.

The work of these two was continued and improved by Thomas Telford who was born in a remote Dumfriesshire village in 1757. He built the Ellesmere Canal which connected up the Mersey, the Severn and the Dee; and the Caledonian Canal, which cut right across Scotland. Both of these presented great difficulties of construction—difficulties which Telford tackled in a manner entirely his own. Among the 120 bridges which he built was one over the Severn which was the first iron bridge to be constructed in this country, and he did a great deal to open up the



ENGLISH SEDAN CHAIR

mountainous districts of Scotland by planning and constructing over nine hundred miles of good roads.

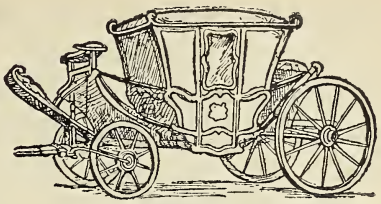
* * *

For at last the poor old, neglected roads were coming in for their share of attention.

Britain had had very few decent roads since the days of the Romans. They had so little foundation that in wet weather they were little better than seas of mud. As we have seen, people, if they travelled at all, went on horseback and most things were carried on pack horses.

In Elizabeth's reign some attempt was made to improve this state of things, for the villagers were ordered to keep their section of the main road in repair. They found this so burdensome that in Charles II's reign they were given permission to put up gates and to take toll of all travellers who passed over their section of the road. This plan certainly obtained money to keep the road in repair but as the number of "turnpikes" increased, they became very troublesome to travellers—at one time there were nearly a thousand turnpikes to two thousand miles of road.

But this was only on the two or three main roads—



STATE COACH

the rest were nothing but tracks of mud into which, in wet weather, the wagons sank axle deep, and the attempt to repair them by filling the holes with logs of wood and huge stones only made them worse than ever.

Coaches were introduced in Elizabeth's reign—they were splendid gilded things, but oh! so uncomfortable, for they had no springs, and shook their oocupants badly as they jolted over the uneven roads; so, naturally, they were not very popular and even in Charles II's reign people preferred to go on horseback: delicate or elderly people sometimes travelled in litters.

It was not until the latter half of the 18th century, that great period of invention, that much improvement was made in these coaches. The coach still used by the Lord Mayor of London on state occasions was first used in 1751, the year in which Clive won the Battle of Plassey, while the King's State Coach was made in 1761. In 1784 coaches were first used to carry the mails, and a regular service was started. At first they travelled only about six miles an hour and their progress was full of excitement and danger, but when the roads were improved at the beginning of the 19th century they averaged a speed of eleven or twelve miles an hour.

As we have seen, Telford was the first man to give serious attention to the improvement of the roads, but

though his methods were good they were too expensive to become popular with most authorities. It was another Scotsman, John McAdam, who discovered a method of road making which was good and not too dear.

His plan was to lay a foundation of big stones through which the water could drain and over these to place a layer of very small stones, over which heavy rollers were passed, so that the whole was bound firmly together and gave a smooth and lasting surface. The road was made to curve slightly downwards at the sides so that the water drained quickly off.

All through the Napoleonic Wars McAdam was experimenting and his first successful road was made in 1815, the year of Waterloo. For a hundred years his plan has been followed and thousands of miles of "macadamised" roads have been constructed all over Britain. It is only within the last twenty years or so that new methods of road making have supplanted those discovered by the old Scotsman in George III's reign.

QUESTIONS

1 What do you mean by Transport?

2 Why was it necessary to improve transport at this time?

3 Name some great canal and road builders, and say something of their work.

CHAPTER 8

The Transport Revolution

Part II—Steamboats and Railways

But in spite of the canals and the improved roads, transport was not keeping pace with the demands of production. More and more coal was required for the factories, more and more building materials for the growing towns, and horse-drawn barges and horse-drawn carts still moved too slowly to satisfy the growing needs.

At last men again turned their attention to steam and its wonderful power. If steam could be used to drive machinery could it not be used to move boats and carts and so speed up transport?

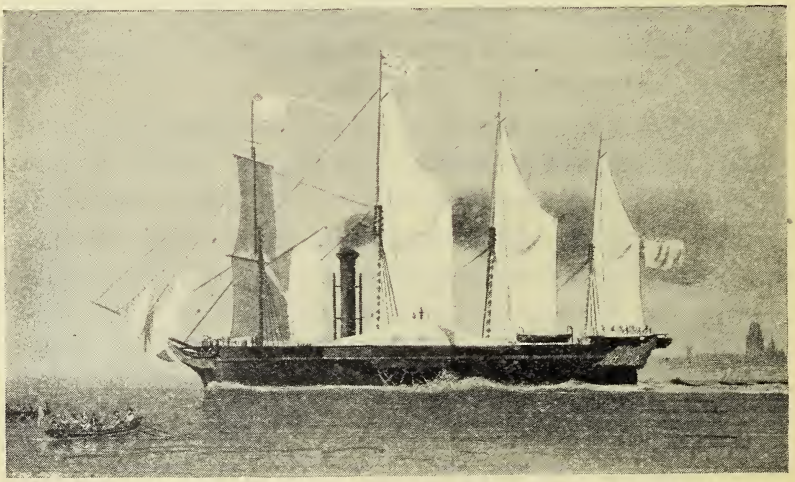
Many experiments were made, and at last, about 1803, a Scotsman named Symington made a little steam tug which was launched on the Forth and Clyde Canal. Though this was a wonderful step forward, the little tug was not popular in Scotland, but Robert Fulton, an American, saw its possibilities. He went home, built a better boat, fitted it with one of Watt's engines, and in 1805 launched it on the Hudson River. He called it the "Clermont" and for some time it sailed regularly across the river—the first steam driven boat to carry passengers.

Some years later a little passenger steamer,

the "Comet," was launched on the Clyde, and plied regularly for some time between Glasgow and Helensburgh.

Greatly daring, a tiny steamer went right across from Brighton to Havre in 1816, and in 1820 one crossed the Irish Sea from Holyhead to Dublin.

But it was not until 1838, the year after Queen Victoria ascended the throne, that two steam driven British ships ventured to cross the wide Atlantic. They took eighteen days on the journey: a sailing ship might take anything from three to five weeks, according to the wind. These two ships, the "Sirius" which sailed from Cork, and the "Great Western" which sailed from Bristol, both carried sails as well as



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THE "GREAT WESTERN" STEAMSHIP

engines, for their owners felt that they had not yet thoroughly mastered this great new power—steam.

* * * * *

During the next half-century progress was rapid.

A young man from Nova Scotia, Samuel Cunard, came over to England and with two other men who were engineers and shipbuilders, he started a company and began building steam ships which should sail as a regular service and carry the mails across the Atlantic.

In 1840, amid scenes of great excitement, the "Britannia," the wondership of that day, was launched in the Mersey. She was a wooden paddle steamer, 207 feet long, and could carry 115 cabin passengers. With her 740 horse power engines she completed the journey from Liverpool to New York in fourteen days—a record time.

Forty-five years later the first iron ship, the "Persia" was launched. She was still a paddle steamer, but about the same time "screw" steamers began to appear, and in 1900, the twin screw steamer came into use.

To-day the "Mauretania," with her 70,000 horse power engines, carries her 2,000 passengers across the 3,000 miles of Atlantic in the record time of four and a half days.

How excited Fulton would have been, could he have seen this beautiful monster, 790 feet long, come steaming into harbour!

* * * * *


MAURETANIA

Meanwhile, other men were experimenting with steam as a means of land transport.

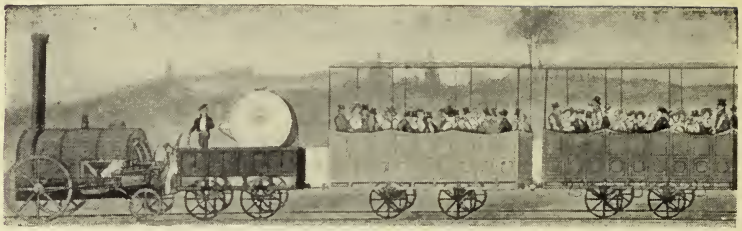
Watt's assistant, Murdoch, had made a very small engine which would move, as early as 1786. Two other men, Trevithick and Hedley, improved on this, until they produced the "Puffing Billy," an engine which, with a great deal of noise and smoke and smell, could move somewhat jerkily along iron rails, and—wonder of wonders—could draw a truck behind!

These first attempts to make a steam locomotive were clever and important, but the results were too crude to be of much use: it remained for George Stephenson to improve on them until he could produce one which had some practical value.

George Stephenson, who was born in 1781, lived in a small, one-roomed cottage with his parents and five other children. The family was so poor that there was no question of school, so when he was only seven or eight years old George was earning a shilling a week, scaring birds and minding cows for a neighbouring farmer and by the time he was thirteen he was doing the regular work of a farm labourer.

But his real interest was not with farming but with machinery, so when he was fourteen he got work as a stoker at a colliery where his father was engine man, and he took a great delight in the working of Newcomen's engine.

When he was seventeen he got a job as engine man in another colliery. How proud he was of his more responsible post! "Now I am a man, made for



EARLY PASSENGER TRAIN

life," he exclaimed as he went home with the 12s. which was his weekly wage.

He determined, too, to get a little education, and after his long day's work he tramped off to a night school where he learnt to read. He only learnt to write well enough to sign his name, but he was very good at mathematics. All the time his chief interest was his engine, which he cleaned and tended with loving care, examining it so that he knew just how each part worked and why.

But it was not until he was nearly thirty that his great chance came. He was working then at a colliery where a number of Watt's engines were in use. One of these broke down and none of the older engine men could put it right. At last they called in young Stephenson and he soon had it working again, better than ever.

The owner of the colliery became interested in him and, thus encouraged, he set to work to make an engine which would travel. In less than a year he had succeeded in producing an engine which would not only travel itself, but would pull eight trucks laden with coal up an incline!

EARLY PASSENGER TRAIN

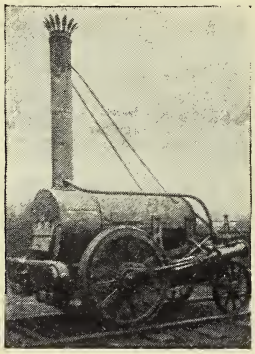
This " Blutcher," as he called his engine, was a great achievement and soon afterwards Stephenson became chief engineer for a railroad between Stockton and Darlington, where the wagons were drawn by horses. Here he built a steam engine, " the Locomotion," to replace the horses and this was able to draw a train of heavy wagons at a speed of twelve miles an hour. Shortly afterwards a coach to carry twenty-six passengers was added and it reached a speed of fifteen miles an hour and so the Stockton and Darlington Railway had the honour of being the first railway in the world to carry passengers.

Stephenson's third and most important achievement and one that bristled with difficulties was the building of a railroad between Manchester and Liverpool, where the trade had increased so enormously during the last twenty years that the canals and roads were often blocked with traffic. It still took two days for a barge to travel from one town to the other, so the manufacturers, anxious to speed up the transport, turned their attention to the steam locomotives and called on George Stephenson to construct the railroad.

The first difficulty to be overcome was the opposition of the farmers and landowners through whose land it was proposed to build the railway. *They* were not going to have the horrid, noisy, smoky engine rushing over *their* fields. Why, the sparks would set fire to the thatched roofs of the houses; the noise would frighten the cows and the poultry; the smoke and smell would ruin the crops! They would not sell their land. The Members of Parliament raised similar objections and for a long time would not grant permission for the railroad to be built.

And besides—who wanted to travel quicker than a horse? It was highly dangerous to rush about the country at more than ten or twelve miles an hour!

At length, however, permission was obtained and the work began. Then Stephenson found himself faced with further difficulties, one of the greatest being the laying of the line across a bog known as Chat Moss. After several failures he had the brilliant idea of building a kind of floating road, supported on both sides by strong embankments made of peat from the bog. This proved a great success and the work was able to go on.



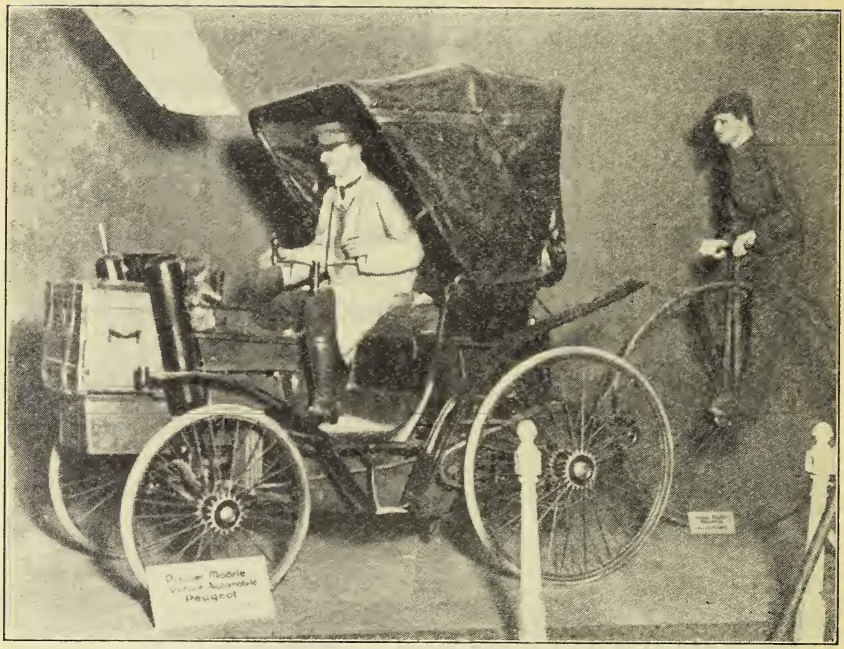
THE "ROCKET"

When the railroad was finished there was an open competition, with a prize of £500 offered for the best engine. Stephenson won the prize with his engine, the "Rocket," which could draw

trucks at the rate of 29 miles an hour. Without the trucks it could travel at thirty-five miles an hour—a tremendous rate for our great-grandfathers, whose notion of speed was a fast galloping horse.

Unfortunately one of the promoters, the good Mr. Huskisson, was killed when crossing the line to speak to a friend and this confirmed many people in their fears, but the railway engine had now proved its value, and during the next fifteen years Stephenson and his son Robert were kept busy constructing railroads. Robert proved himself as clever at bridge-building as his father had done in the making of engines.

ROYAL SCOT *v.* BROADWAY LIMITED



ONE OF THE FIRST MOTOR CARS NOTE ALSO THE "HIGH WHEELER"

Railways had come to stay and during the next few years hundreds of miles of railroad were built all over Britain. At first, third class passengers were carried in open carts little better than cattle trucks. But very soon the charge was fixed by Act of Parliament at a penny a mile, and then such numbers of people began travelling behind these new "iron horses" that the railways became quite prosperous and the companies were able to make more comfortable carriages for all their passengers.

* * * * *

TELFORD'S BRIDGE ACROSS THE MENAI STRAITS

The roads of England saw many changes during the 19th century.

In 1801 there was a horse-drawn tram running between Wandsworth and Croydon, but it was only used to carry goods. It was in Birkenhead, in 1860, that a horse-drawn tram to carry passengers was first used, and it proved so popular that very soon every town of any size was laying down miles and miles of lines for these trams. They were used until the beginning of the 20th century, when electric trams began to take their place.

As early as 1827 a steam coach, the forerunner of our motor car, was tried out on the road between Gloucester and Cheltenham, but there was such an outcry about its "dangerous speed"—chiefly by the owners of the horse drawn coaches, that it never became popular.

In 1884, Daimler, a German, invented the petrol engine, and the first queer, uncomfortable, noisy

motor car appeared on the roads. It could only travel about eight or nine miles an hour, but in England people were still worried about this speed, and a law was passed which ordered that a man carrying a red flag must walk in front of these dangerous vehicles to clear the way! Naturally motoring did not become very popular in this country until that stupid law was abolished. By that time Daimler and others had greatly improved the petrol engine, and people began to realise that the motor car was not a toy but a practical and useful invention.

Nowadays petrol driven omnibuses are taking the place of the electric trams, while electric trains are gradually replacing steam trains.

On the water, motor boats are now a commonplace, while even for long voyages the petrol engine is gradually replacing the steam engine.

QUESTIONS

1 Write a paragraph on the development of steam ships.

2 Describe the early life of George Stephenson.

3 What difficulties had he to overcome when building his railroads?

4 Write a "Story of the Road" from Roman times to the present day.

CHAPTER 9

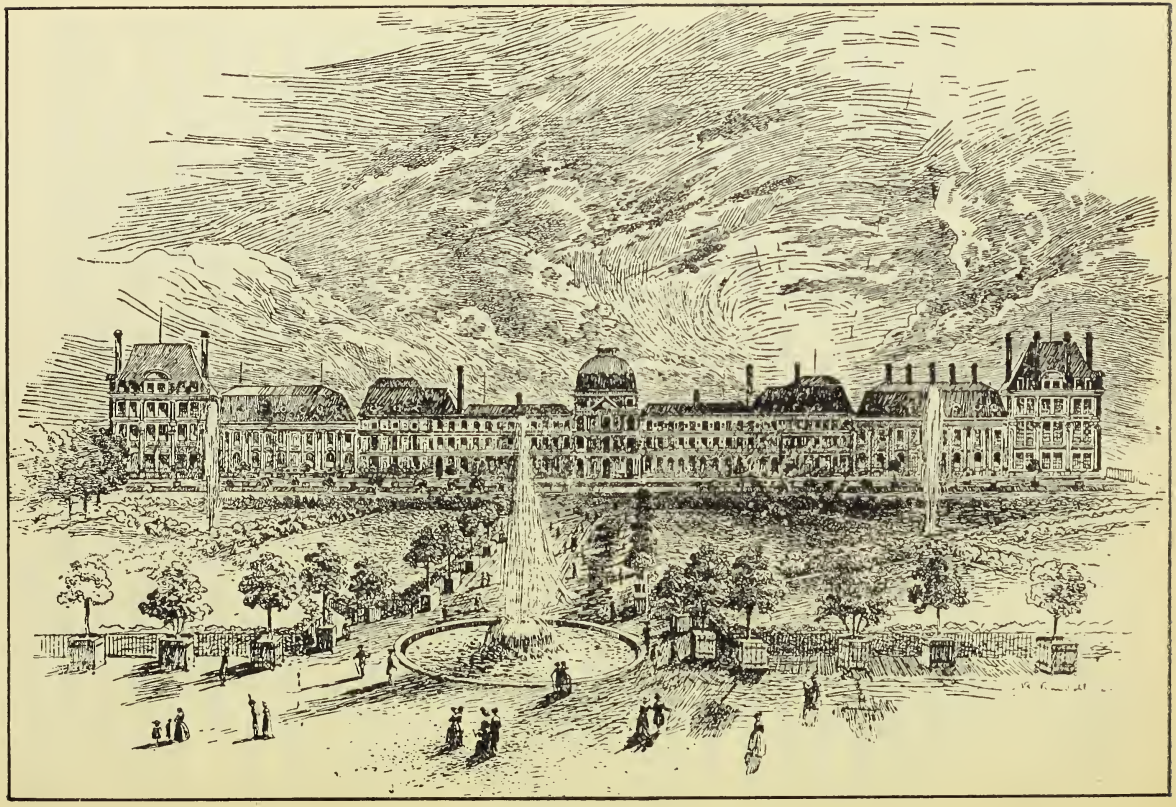
The French Revolution

Part I

In 1688 England had experienced her Bloodless Revolution; it had been such a quiet and peaceful affair that it was hardly right to call it a Revolution at all; "Reformation," would have been a better name. But in 1789 France was torn to pieces by a Revolution as terrible as these events usually are: a tremendous amount of blood was shed, and an awful amount of misery and suffering was caused by the very people who wished to prevent this suffering.

During the last hundred years, while the condition of the English people had been improving, that of the French had been gradually going from bad to worse. The country had had a long series of wars which had caused it to be badly in debt: the kings and their courts had been wildly extravagant and had wasted money on their own pleasures, and to get this money they had put more and more taxes, not on the nobles and wealthy folk, but on the workers who were ground down by taxation until they were practically starving.

The peasants were still treated in much the same way as they had been in England under the Norman kings, six hundred years before; they had to work on the lord's land for a certain number of days each year, and grind their corn at his mill; in fact they were little better than serfs.



THE TUILLERIES, PARIS

In England, as we have seen, most of the wealthy landowners took an interest in their land and their tenants shared in the improvements which were brought about. But in France they took no interest in it at all except to see how much money they could get out of it. They made no improvements themselves, and if a tenant farmer made any on his own little farm, his rent was put up so that he was often worse off than before.

Under these conditions, naturally, the people did not try to make any improvements, and the workers both in town and country were miserably poor and downtrodden. Food and clothing and all the necessities of life were extremely dear, for they were not only taxed when they were brought into the country, but also as they were sent from one province to another.

Now in 1789 the foolish, extravagant King, Louis XVI, not knowing which way to turn to get more money, decided to call together the Parliament. In France the Kings still had absolute power to do as they liked, and they had never called a Parliament for 125 years! They had ruled with the help of their favourite ministers, made war or peace, put on taxes, taken away rights and privileges without ever consulting the wishes of the people in the slightest degree, and for years the people had suffered in silence.

But towards the end of the eighteenth century a number of writers, Voltaire and Rousseau in particular, had been pointing out how much better off were the poor people of England than those of France. They gave the French people fresh ideas and made them

CAPTURE OF THE BASTILLE, 1789

more and more dissatisfied with their hard lot. So when Louis XVI called together his long delayed Parliament the leaders were determined that they would have certain wrongs put right.

The Commons demanded that they should sit in the same house as the Nobility and Clergy, so that they could voice the grievances of the people. The nobles objected to this and quarrels began immediately. The King became alarmed and ordered the army to Paris to protect his family and his friends. There were some Swiss and German regiments among those called out, and this annoyed the French people still further.

Then, as so often happens when downtrodden people begin to feel their power, they lost their heads. They were not used to governing themselves and so they could not do so at a moment's notice. Immediately they became a wild mob. Picking up any weapon or tool which came to their hands they marched through Paris, slaying any who tried to stop them.

In the middle of Paris was a strong fortress and prison known as the Bastille. Hundreds of people had been thrown into its gloomy dungeons on the slightest excuse and without a proper trial, and there they had suffered untold hardships and tortures and had very often remained there, forgotten, until death came to release them.

In England one of the clauses of the Magna Charta had made it a law as long ago as 1215 that no man could be imprisoned without a trial, but in France

SINGING THE MARSEILLAISE

the people had not that safeguard, and so now their anger and hatred turned first against that gloomy fortress in which so many of their friends had suffered unjustly.

Marching to the Bastille with whatever weapons they could muster they overpowered the garrison and set all the prisoners free. Then they set fire to the hated building and burnt it to the ground.

The National Assembly, as their Parliament was now called, at once set to work and passed some good laws, completely abolishing the old feudal system and the bad laws which had pressed so heavily on the poorer people. "Liberty, Equality, Fraternity" was to be their watchword, and everybody talked and thought about the "Rights of Man."

But unfortunately, the leaders of the Assembly were in too big a hurry. They had had so little experience in governing that they did not realise that the best reforms are those which come slowly: it was no use rushing from one extreme to the other. They wanted to sweep away everything at once and to give the people a "New Heaven and a New Earth."

Then also the fall of the Bastille seemed to make the French more fierce and revengeful and they appeared to go almost mad with the lust for killing. During the "Reign of Terror," as this period was called, all the nobles, men, women and children who could not excape were seized, thrown into prison, most roughly treated and condemned to death by the guillotine. Thousands perished in this way while hundreds of

After A. E. Word, R.A.
LOUIS XVI AND FAMILY IN HIS PRISON IN THE TEMPLE

others fled to England or Belgium and the rebels seized their property.

At first the English had sympathised with the French in their attempt to gain freedom and a good government, but all this violence did them no good in the eyes of other countries, and when they even condemned their King and Queen, and put them to death on the guillotine, most sensible, moderate people turned against them.

Then, to crown all their acts of wickedness and folly they began to urge all the workers in other countries to follow their example, overthrow their governments

MARIE ANTOINETTE LED TO EXECUTION

and kings and set up Republics; and at last they felt themselves so strong that they declared war on the countries which had given protection to the French aristocrats. Thus England and almost the whole of Europe found themselves engaged in a terrible war which ravaged the whole continent for a number of years.

QUESTIONS

1 Describe the conditions in France which led up to the Revolution.

2 Give some account of the Revolution.

CHAPTER 10
The French Revolution
Part II

Nearly all the earlier leaders of the Revolution, Robespierre and others, managed to lead for only a short time; they soon lost their power over the mob, and so were put out of office; some of them were themselves put to death on the same guillotine to which they had sent so many of their fellow countrymen. But when the war began, a young Corsican Lieutenant, Napoleon Bonaparte, soon proved himself a most capable leader of men.

Rapid promotion gave him control of the whole army of France, and so clever was he that he was able to conquer nearly the whole of western Europe.

NAPOLEON

Then, so powerful did he become, that he had himself made Emperor of France, thus upsetting the Republic which had been the outcome of the Revolution. But he did not go back to the bad old days. He was a wise ruler as well as a good soldier and he drew up

for France and for the countries he conquered, a splendid code of laws by which they were to be governed.

But Napoleon never conquered England, though he tried very hard to do so.

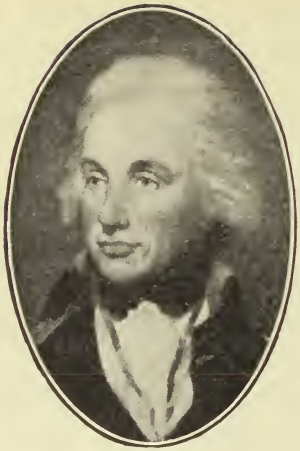
The Industrial Revolution had given England a start in the race for prosperity and the wealth thus accumulated helped to build the ships and provide the guns and pay the men which were to keep England free from foreign invasion. All Europe had to buy manufactured goods from England at this time, even Napoleon, though he was fighting against us, had to buy the overcoats for his soldiers from us.

In addition to this material prosperity, we had three good men at the head of affairs, Pitt, Nelson and Wellington.

* * *

William Pitt the Younger, son of a famous father of the same name, had been brought up from boyhood to be a statesman. At the early age of twenty-four he was made Prime Minister, the highest position in the Government, and

WILLIAM PITT



NELSON

it was his youthful but capable hand which steered England safely through the earlier years of this troublous time.

Napoleon wanted to invade England, his most persistent and troublesome enemy, but he could not do so while her fleets protected her shores. By a trick he tried to draw them away, but the skill of our great seaman, Horatio Nelson, saw through the trick and his valour and good leadership successfully foiled Napoleon's plans and put an end to all future attempts on the shores of England.

You all know the story of Nelson who had been on the sea since he was a lad, and who had lost an eye and an arm in his country's service before he fought his last and greatest fight in Trafalgar Bay. His message to his men, "England expects every man will do his duty," has thrilled and inspired Englishmen all over the world from that day to this. Duty! Not glory nor honour, nor fame nor wealth, but stern and simple Duty has been the watchword of our heroes—leaders and led alike, both in peace and war.

Nelson died doing his duty but he saved England from all fear of foreign invasion for many years to come.

* * * * *

Napoleon was now Emperor of France, the master of practically the whole of Western Europe. As we have seen he gave his country good laws, he rebuilt and beautified Paris and his people almost worshipped him.

In 1812 he led a huge army of about half a million men into Russia, conquering and laying waste the country on his march. But when he neared Moscow, which he expected to enter in triumph, he found a

H.M.S. "VICTORY" FLYING NELSON'S SIGNAL

ruined and deserted city. The Russians, rather than allow their capital to fall into the hands of the French, had set fire to the city and fled, and so Napoleon found himself stranded in the heart of that vast country, at the approach of winter, and there was nothing he could do but retreat along the way he had come. In that desolate, deserted country, his men could not replenish their stores and they marched those hundreds of weary miles through the severe Russian winter weather, half-clad and half-starved.

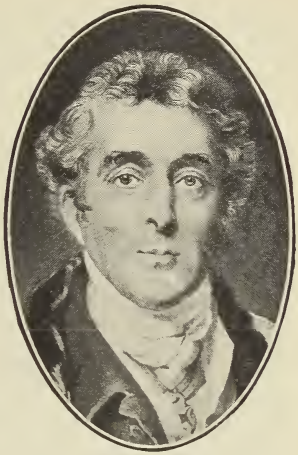
Their sufferings were terrible and only Napoleon's magnificent leadership could have got even a remnant of that huge army back to their own land again. As it was, only about 20,000 weak and famine-stricken men struggled back to France, the rest of that gallant force of 500,000 died of wounds, pestilence, cold and famine during that awful march.

But meanwhile his enemies had not been idle. A "Coalition" had been formed by the various nations and before Napoleon could strengthen his forces, so disastrously weakened by the Moscow campaign, he was met by a combined army at Leipzig and badly defeated.

He never recovered from these disasters. A year later the allied armies were able to enter Paris, and Napoleon was forced to give up his throne. He was then banished to the little island of Elba, off the coast of Italy, and Louis XVII, the brother of the guillotined King, became King of the French.

Before a year had gone by, however, Napoleon escaped from Elba and landed in the South of France

with a handful of men. So great was the magic of his name that the people rallied round him in thousands and even the army sent to capture him went over to his side. He marched to Paris and for a hundred days the little Corsican was again "The Emperor."

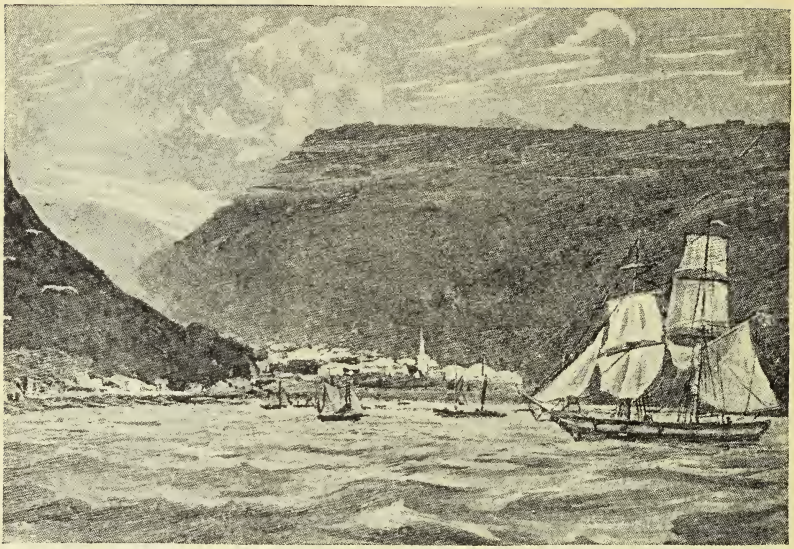


WELLINGTON

But Europe was tired of war, especially a war fought to win glory and honour for one nation and one man. So the countries quickly rallied their forces, placed the combined army under the command of Wellington —as great a soldier in his own way as Napoleon was in his, and utterly defeated the French at the famous Battle of Waterloo, 1815.

Napoleon was obliged to surrender and was banished this time to the lonely and far distant island of St. Helena, from which escape was impossible. The King was restored to the throne of France and it looked as though all the suffering and misery of the French Revolution had been in vain.

But this was not so. The world had been taught that the people would no longer be ruled by a tyrant, and though a king was restored to the throne he was obliged to rule according to the good, new laws drawn up by Napoleon and to call regular parliaments and so to keep in touch with the wishes of his people.



ST. HELENA

France in a few years obtained the liberty and good government which England had enjoyed for a hundred years and more, but at what a terrible cost! All the horror and suffering and bloodshed of the Revolution and the war which followed would have been avoided if the people in authority had not oppressed for so long their weaker brethren, who, as soon as they began to feel that they had a little power, lost all self-control and tried to govern others before they had learnt to govern themselves.

QUESTIONS

1 Describe the work of Napoleon.

2 What do you know of:—(1) Nelson, (2) Wellington, (3) Pitt?

PART II

Reformation

CHAPTER 11

Reforms for the Workers

All the new inventions of which we have been reading brought about great changes in the lives of the people. Life altered more in half a century than it had previously done in ten centuries.

The new spinning machines and weaving looms were too big and expensive for each house to have one of its own. Besides, they lost half of their value if they were still worked by hand. So wealthy manufacturers put numbers of them together in mills or factories where they could be worked by water and later by steam, and the workers, finding that their own hand spinning and weaving no longer paid, flocked to these new mills for work.

At first the workers often had to walk long distances to the mills, but very soon houses were built for them near the factories and so hundreds of little towns grew up, towns full of badly built, badly drained, badly ventilated houses, all crowded together, and in these unhealthy homes thousands of workers lived, often many families sharing one house. In 1837, the year

Queen Victoria came to the throne, it was reckoned that in Manchester alone, over 20,000 families were living in damp, underground cellars.

The factories too, were very often badly ventilated, dirty, and damp with steam. In these places men and women and even children spent the greater part of their lives, many of them working as much as sixteen hours a day.

Thus the people left the country and became town dwellers, crowding into the Midlands, the West Riding of Yorkshire, Lancashire and the district round Glasgow, while the little old towns of South-Eastern England, the district which had until this time been the most prosperous and thickly populated, began to decay.

But it was not long before a few men began to realise that it was not right for people to live under such conditions, and they tried hard to bring about a few reforms. The workers themselves became discontented, and as they were now gathered together in large numbers, they could meet and discuss their troubles. In the old days if a master made his men work long hours, or if he housed them in filthy, leaking cottages, they simply had to put up with it: they were too far away from other sufferers to combine and demand some improvement, but now that they were gathered in towns this was just what they could do.

Their first attempts were rather unfortunate. They thought that the best way to get their condition improved was to have some representatives in Parliament. At present most of the members of Parliament were

landowners whose chief interest was in the country. They understood little and cared less about life in new industrial districts. Now the workers were beginning to feel that the big towns which had grown up during the last twenty or thirty years should send men to Parliament who could speak for them, while the "Rotten Boroughs," that is those towns whose population had dwindled to a very small number, should cease to be represented.

They held big meetings to discuss their grievances, but unfortunately these often developed into riots when they lost their heads and went about damaging property.

The worst of these riots was at Manchester in 1819 and the government, still afraid that a Revolution similar to that which had swept over France might break out in England, dealt very sternly with this great gathering, ordering the soldiers to disperse the crowds. The result was that five men were killed and a number injured in this "Manchester Massacre" or "Peterloo" as the affair was called.

During the French Revolution the English Government had been so afraid of the unrest spreading to England that they had passed laws forbidding the workmen to combine to ask for more wages or better conditions. These "Combination Laws," as they were called, were still in force, so, as the men could not meet openly they met in secret, and came to look upon their masters as enemies. This was bad in every way, and Francis Place, a man who had worked his

way up from a very poor labourer, never rested until he had got the Combination Laws repealed, in 1824.

This meant that Trade Unions could be legally formed, and from that date their growth was rapid. Every trade formed its own Union in much the same way as they had formed Guilds in olden days, and these Unions did much to protect the interests of the workers and to train them to manage their own affairs. But it was not until 1832 that the First Reform Bill, which gave representation to the new towns, was passed.

* * * * *

Other people besides the workers themselves were disgusted with the conditions of life under which they laboured.

A wealthy nobleman, Anthony Astley Cooper, afterwards Lord Shaftesbury, was so appalled at what he discovered, that he determined to devote his life to improving their lot, particularly that of the women and children.

He found that it was quite a common thing for small children of six and seven years old to be hurried from their beds at five o'clock each morning and taken to the factories where, in the hot, damp atmosphere, they worked at little tasks, until six or seven in the evening. For this work they received a shilling a week. Worse still was the case of orphans and pauper children who were sent in batches from the workhouses to the factories where, with very little food, they were kept working fifteen or sixteen hours a day until they dropped asleep among the machines.

Week after week this was the life led by hundreds of these tiny children in the mill towns. No play, no fresh air or sunlight, no school, poor food and very little sleep. No wonder they grew up pale and stunted with weak little legs and bent backs, "just like a crooked alphabet."

For years Lord Shaftesbury and a few others worked to have this sort of thing forbidden by law. You would not think that people would need much persuading to stop this cruel system, but in those days—only a hundred years ago—many people thought that England's trade would be ruined if the manufacturers did not keep this child labour, so Shaftesbury had great difficulty in persuading Parliament to do anything. He did, however, get a few Regulations Acts passed: these improved matters a little, and in 1833 the First Factory Act became law. This forbade the employment in cotton mills, of children under nine, and ordered that children between nine and thirteen were not to work more than nine hours a day: young people between thirteen and eighteen not more than twelve hours a day. The Act also demanded that Inspectors should be appointed to see that the working conditions in the mills were improved.

Shaftesbury was far from satisfied and went on working until, fourteen years later in 1847, the Second Factory Act was passed, which limited the working day of women and young people to ten hours a day. Unfortunately these Acts concerned only the workers in the cotton and woollen mills: other trades were,

for a time, able to keep their women and children working as long as the masters wished, and often under dreadful conditions.

The chimney sweeps, for instance, sent tiny boys up the chimneys to sweep out the flues: sometimes they stuck fast and were in danger of suffocating: always they suffered cruelly, bruising their knees and arms on the rough brickwork and getting the thick soot in their throats and eyes. Shaftesbury never rested until he had a law passed making it illegal to send boys up the chimneys.

In the coal mines the conditions were still worse. Down in the dark, underground passages, which were too low to allow people to stand upright, women and children spent long hours every day crawling on hands and knees and dragging behind them small wagons full of coal. In other places they walked almost double, carrying on their shoulders heavy baskets which were held in position by straps going round their foreheads: a terrible life. Shaftesbury called attention to this evil and did not rest until he had got it partly swept away by the Mines Act of 1842.

Since that time many other Factory and Mines Acts have been passed to make life safer and more pleasant for the workers.

In 1875 Disraeli passed the Third Factory Act, which fixed *nine* hours as the working day for all women and children in textile industries. It was not until 1886 that a Shop Hours Act was passed by which young people under eighteen were forbidden to work

more than 74 hours a week. This still meant 12 hours or more a day, and the Unions which were becoming more and more powerful did not rest until they had these hours still further reduced.

And so, throughout the last century the idea that it was an important part of the Government's duty to look after the welfare of the workers, was steadily growing.

QUESTIONS

1 What changes in the lives of the people were brought about by the invention of machinery?

2 Describe the bad conditions under which children lived and worked before the passing of the Factory Acts.

3 Shaftesbury is often called the "Children's Friend;" how did he earn this name?

CHAPTER 12

The Story of Parliament

Part I

Let us pause a moment and see exactly what we mean by this "Parliament" that the workers were so anxious to reform.

Ever since England first became a kingdom there had been a body of men whose duty and privilege it was to advise and help the King in his business of governing the country.

In Anglo-Saxon days this small group of men was called the Witan or "Witenagemot" which meant the

" Council of Wise Men." It did not in any sense represent the people but consisted of such Bishops, Abbots and chief nobles as were summoned by the King, and it met—generally three times a year—in London, Winchester, York, or wherever the King happened to be.

But though the King chose the Witan, the Witan had also the power to choose the King and to put him off the throne if his rule was unjust. It was not until after the Norman Conquest that the Kingship became hereditary, that is, passed from father to son, and so the power of the King increased.

* * * * *

The Norman Kings called together a "Great Council" which consisted of the chief feudal lords and the lords of the Church. These men sat in council by right of their possessions or their office ; they were not chosen or " elected " by anyone and they really had very little power, for the Norman Kings were " absolute," that is, they ruled practically as they wished, without consulting anyone.

This went on until the bad rule of John and the weak rule of his son, Henry III, roused the barons to take some action. They forced John, in 1215, to sign the Magna Charta—the Great Charter on which English liberty has grown, and in 1264 they took up arms against his son.

Henry III was taken prisoner and Simon de Montfort, who then held the chief power, called together the old Council, to which he added " knights

KING JOHN SIGNING MAGNA CHARTA.

of the shires," to represent the counties and twenty-one burghers to represent the towns.

This was in 1265, and because these men who were chosen to represent the counties and the towns were not nobles, they formed what was afterwards called the first "House of Commons."

Thirty years later Edward I, following De Montfort's example, called together an assembly, which represented the nation still more fully, for it consisted of two knights from every shire, two townsmen from every borough, two clergy from each diocese, as well as the usual bishops, barons and earls. This assembly was known as the "Model Parliament," as all succeeding Parliaments were modelled on it, and from it the one we know to-day has developed.

At first all the Members of Parliament met in the same hall, but before the year 1340, they had divided into two "Houses." The great nobles took their position in the "Upper House" or House of Lords, by hereditary right, and the archbishops and some of the bishops joined them there as a privilege of their office. In the "Lower House," or House of Commons, sat the representatives who were elected by the counties and the towns, and this House, as the years went by, gradually became the more powerful and important of the two, and gathered into its own hands nearly all the affairs of state.

It was soon laid down that no taxes should be imposed on the country without the consent of Parliament: so whenever, in those early days, the

King wanted money for his wars or his journeys abroad, Parliament granted it to him on condition that he gave his consent to certain laws for the good of the people. Thus the budding Parliament gradually got more and more power into its own hands.

We have seen in Book II how the Stuart kings tried to defy their Parliaments, claiming "Divine Right of Kings," and the power to rule alone, but how Parliament, holding firmly to the old law which gave it the sole right to tax the people, kept the King short of money and so weakened his power.

But the Kings did not give up without a struggle and the quarrel became so bitter that it ended in the Civil War in which, in the end, Charles I lost his head.

Parliament gained still more power when William III became King, for it was quite clear that he was King only by the will of Parliament. In his reign too, the Triennial Act, ordered that no Parliament should sit longer than three years. Previously if a King had a Parliament to his liking, he could keep it sitting for the whole of his reign, however much the feeling of the nation might change.

Some years later the period was altered to seven years, for Parliament felt that the Triennial Act put them too much at the mercy of the people. Nowadays the longest time a Parliament may sit without an election is five years, unless in the case of some very special event such as the outbreak of the "Great War," when the Parliament then sitting fixed its own length.

QUESTIONS

1 Give some account of the Parliament in Anglo-Saxon and Norman times.

2 What changes did Simon de Monfort and Edward I introduce?

3 How did Parliament grow in power during Stuart days?

4 How did this power increase after the Bloodless Revolution? (See Chapter 1).

CHAPTER 13

The Story of Parliament

Part II

Parliament had thus been growing in power during the last two centuries, but during all those years there had been little or no change in its formation.

Then came the Industrial Revolution and the sweeping changes in every department of life that followed in its train.

It was found, when people came to enquire into things, that many of the towns which hundreds of years ago had been large and important, had so declined in population that they were now mere villages, yet they still sent their two members to Parliament. They were now " Rotten Boroughs " or " Pocket Boroughs " —in some of them the population had disappeared altogether, and the land owners were able to give the seats in Parliament to their friends.

On the other hand, the growing manufacturing towns of the North and the Midlands, which had sprung up with the invention of machinery, were not represented in Parliament. Neither masters nor workers had a vote : both began to feel that this state of things was very unfair and worked hard to have it altered so that more people would be able to take an active share in the government of the country.

So in 1832, after a great deal of opposition from the Tory landowners who wished to keep all power in their own hands, the first Reform Bill was passed. By this Bill a number of seats were taken from the " Rotten Boroughs" and given to the big towns. This meant that not only the landowners now had the right to vote, but also the factory owners, the traders, the bankers, etc., all those who owned a house of a certain value : that is, this First Reform Bill gave the vote to the middle class.

But the working men, the wage earners, were not affected and they continued to agitate until in 1867, Disraeli, the Prime Minister at that time, got the Second Reform Bill passed. This gave a vote to every man in a town who was a householder and a rate-payer. And in 1884, Mr. Gladstone's Third Reform Bill, gave the vote to the agricultural labourers.

Thus these three Reform Bills had given the vote, and through it, an active share in the government of the country to all *men* who were *householders*. Thirty years later, during the great World War, the vote was given to *all* men over twenty-one years of age.

As the years had gone by women had come to take

a more active part in the work of the world, and so they too, began to demand a voice in the government. For years a few women worked hard for what they considered their right, but the men opposed them at every turn. But during the Great War, while so many thousands of men were away fighting, the women came forward and valiantly took up the men's work. They ploughed the fields, drove lorries and vans, made munitions and gained the admiration of everyone by the splendid way in which they worked. At the end of the War they got their reward, for in 1918, women over thirty were granted the right to vote.

Ten years later, in 1928, the "franchise," as the right to vote is called, was given not only to householders, but to *all* men and women over the age of twenty-one.

This is a great responsibility, for the voter decides the kind of men or women who shall sit in Parliament and govern the land. Voting for the member who shall represent us in this great business of law-making is no light matter, to be undertaken carelessly or in a moment of excitement. It demands intelligence and knowledge—knowledge of men and the things they stand for—knowledge of the affairs of the world on which they will have to give their opinion. And though we now may vote at the early age of twenty-one, there is no excuse for ignorance, for never was knowledge so easy to obtain as it is to-day.

* * * * *

Seventy years ago all voting was done openly and this led to many abuses. Tenants often had to vote

according to the wishes of their landlords : if they did not do so, they might be turned out of their houses. Workmen dare not vote against the wishes of their employers for fear that they would lose their work.

But in 1872 the "Ballot Act" put an end to this. From this time onward the Ballot has been secret.

Each voter is given a paper bearing the names of the candidates. He puts a cross against the name of the candidate he favours and drops his paper into the Ballot Box, and no one knows for whom he has voted. The boxes are carefully guarded, and at the end of the day they are opened in the presence of a number of witnesses and the votes counted. The man or woman who has the most crosses against his or her name is thus elected to represent that district in Parliament.

* * * * *

So to-day Parliament consists of two Houses, the "House of Lords" and the "House of Commons." In the House of Lords sit the nobles or peers, the two archbishops and several bishops. This house is not elective. The nobles take their seats by right of birth and the bishops by right of their position in the Church.

The House of Commons is elected by ballot : men and women are sent to represent the different districts in England and Wales, Scotland and Ulster. These members belong to various "parties," some are Conservatives, some are Liberals, some are Socialists, etc., and whichever party has the majority, *i.e.*, the greatest number of members, is in power, and forms

HOUSES OF PARLIAMENT

the "Government." The King then calls on one of the men of that party to be the chief or "*Prime Minister*," and the Prime Minister chooses certain men to take charge of different branches of the Government. There is the Chancellor of the Exchequer, the Secretary for Education, the Secretary for India, the First Lord of the Admiralty, the Minister of Health, the Minister of Agriculture, etc., etc., and these heads of the different departments form the *Cabinet*.

Usually the Prime Minister chooses all the members of the Cabinet from his own party, and so we have "Party Government," and the members who are not of his party often oppose and try to throw out bills

which he wishes to pass. But sometimes, if the country is in danger or great difficulty, the Prime Minister chooses the best men from *all* parties to form the Cabinet. Thus he forms a *National Government* and the members of the other parties do not oppose his measures unless they think they will not be for the good of the country.

If a member wishes to pass a new law, he introduces a "Bill" into the House of Commons. There it is read and voted on three times if necessary, small alterations or amendments being made. If it passes the third reading it is sent on to the House of Lords.

Until quite recently the House of Lords could, if they chose, refuse to pass a Bill which had already passed the Commons, but now they have lost the power to do this. They can refuse for a time, but if at the end of two years the Commons still wish it to pass, the Lords can no longer throw it out.

After the Bill has passed both Houses it is sent on to the King to receive the Royal signature. It then becomes a law of the land and is spoken of no longer as a Bill, but as an "Act" of Parliament.

QUESTIONS

1 Why was a Parliamentary Reform Bill necessary after the Industrial Revolution?

2 Who has the right to vote to-day?

3 How do they vote?

4 What do you understand by the Cabinet?

5 Name some of the chief ministers in the Cabinet to-day, and say what offices they hold.

CHAPTER 14

Helping the Poor

The further a country advances along the road of progress the more care it takes of those who are not able to look after themselves.

In uncivilised countries the weak and ill, the old and feeble—all those who cannot do much for the good of the community are not wanted: they are uncared for, if not actually put to death. But care of the poor and feeble, particularly in Christian countries, has advanced hand in hand with civilisation.

In early days the Church taught that it was the duty of every Christian to give a tithe, that is, a tenth of his goods, to the service of God. Years later the Witan decreed that a third of this tithe should be spent on the upkeep of the church, a third should go to the clergy, and the remainder to the relief of the poor.

As the years went by a good deal of this money passed to the monasteries; the monks looked after the poor and sick in their neighbourhood, and gave food, shelter and sometimes money, to beggars who simply tramped about the country from one monastery to another.

Many of these beggars were well and strong: they simply would not work while they could get this help

for nothing, and in time they became a great nuisance and even a danger to villagers and wayfarers, so various laws were passed to try to restrict them. Richard II ordered that all beggars should have a licence. In Henry VIII's reign any beggars found begging without a licence were to be whipped, set in the stocks or the pillory, and if they were caught a second time they were to have their ears cut off.

A few years later another Act ordered all towns and cities to collect *alms* in church and elsewhere to relieve the wants of their sick and old, and to set all able-bodied beggars to work. " Valiant and strong beggars " who would not work were to be hanged.

But the alms received were not sufficient and the number of paupers on the roads increased, for about this time the monasteries were dissolved and so the poor folk could no longer turn to the monks for assistance. Voluntary acts of charity had failed so the law had to step in and make the care of the poor compulsory on everyone.

In 1601, towards the end of Elizabeth's reign, the first *Poor Law* was passed. This ordered that every parish must look after its own poor by putting a rate on the people of the parish. The money was to be collected by " overseers of the poor " ; work was to be found for those who could work : the sick and the old were to be provided for, and the children taught a trade.

This Poor Law of Elizabeth's reign was a great advance on anything that had been done before, and it

remained in force with but few alterations for two hundred years.

A Poor Law Amendment Act was passed in 1834. By this several parishes were grouped together to form "Unions"—each Union had to provide a "workhouse" to which all the able-bodied poor could go: no "out-door relief" was to be given to any except the sick and the very old. This remained in force for many years.

But many of the poor people hated the Act. They felt they would rather starve than go into the workhouse. So thinking people who had the welfare of their fellow-men at heart tried to find other means of helping them.

In 1908 Mr. Lloyd George introduced the *Old Age Pensions Bill* into Parliament and after a struggle it was passed. By this Act old people receive a small pension which they can draw at a Post Office, instead of having to ask for Parish Relief, and they can enjoy it in the comfort of their own little homes instead of having to go into the great barrack-like workhouses. Soon afterwards the *National Insurance Acts* and the *Unemployment Acts* were passed. These ordered that the worker and the master should each contribute a small weekly sum—only a few pence—to a central fund. The State would then guarantee that if the worker fell ill he would receive free medical attention, and a small sum of money each week. If he was thrown out of work he would receive an allowance to help him until he got work again.

KING'S COLLEGE HOSPITAL

These Acts, with certain slight alterations, are still in force, and it is important to realise that the contributions of master and workman supply only a very small portion of the amount given in sick benefit or out of work relief. The rest is provided by the Government or the town, who, of course, collect it from the people in the form of taxes and rates. Thus nearly everyone is helping in some degree towards providing his less fortunate fellows with some of the comforts and decencies of life which a civilised society realises should be within the reach of all men.

QUESTIONS

1 Who looked after the poor in early days? Who looks after them now?

2 When was the first Poor Law passed? Why was it necessary?

3 What is the difference between "alms for the poor" and a "Poor Rate?"

4 What steps have been taken to improve the conditions of the poor during this century?

CHAPTER 15

Municipal Reform

The Reform of Parliament was followed by the reform of town government, for it is clear that a Parliament sitting in London cannot attend to every little detail in every little town or village all over the country. So each place has its *local government* by which the townsfolk or villagers, through their representatives, manage their own small affairs and see that the laws passed at Westminster are properly kept.

This idea of local self-government is not a new one. Even in Anglo-Saxon days all landowners above the age of fifteen were entitled to attend the *Shire Moots*. These were councils which met twice a year to settle the affairs of the district. At the head of each council was the bishop of the diocese and an *ealdorman*, appointed by the Witan.

Then each "shire" was divided into districts, and

each of these had its own council called the "*Hundred Moot*," while each small township had its *Town Moot*; *all* freemen were entitled to attend this, and to take part in the election of the Town Reeve and Beadle.

But many men did not realise that this self-government was not only a right but a privilege. They began to neglect it: they were too busy with their farming and other work to attend the meetings: they were willing to leave their affairs to be managed by somebody else. They neglected the meetings more and more until gradually they were no longer called to them and so they lost the right of local self-government, which passed into the hands of a very few who kept all control for hundreds of years.

But during the Industrial Revolution, as we have seen, people began to demand that they should again be allowed to take a part in the management of their own affairs.

So, three years after the first Reform Bill, a *Municipal* or *Town Councils Act* was passed. By this Act each town was divided into wards, and the rate-payers of each ward had the right to elect members to serve on the Council. This plan, started in 1835, is followed to-day with but a few slight differences.

The rate-payers elect the Councillors, who hold office for three years, one-third of their number retiring each year. The Councillors elect (generally, but not always from their own number) certain "elder men" who have had experience in local government, to hold office for six years: these are called the "*Aldermen*."

Then a "*Mayor*" is chosen to be the head of the whole Council. He holds office only for one year.

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The agricultural labourer got the vote in 1884. Four years later, an act was passed giving the country districts responsible self-government, just as the Municipal Act had given it to the larger towns. *Rural District Councils* were formed to look after districts which consisted of small villages and farms, and *Urban District Councils* to look after districts containing small towns.

These Councils were responsible for keeping the roads in decent repair, making new ones where necessary, providing schools, attending to drainage, water supply, etc. They also had to appoint a Board of Guardians to look after the very poor. In 1929, when workhouses were abolished, the duties of the Guardians were taken over by a Public Assistance Committee.

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The new corporations had a great deal of work to do, both in the old cities and in the new towns which were springing up everywhere round the coal mines and the factories. These towns had in many cases been thrown up quickly without any definite plan or system. In many places there was no water supply or lighting and little, if any, drainage.

In 1875 the *Public Health Act* came into force. This gave the Municipal authorities the control of the water supply, the drainage, public parks, etc. It also

gave them power, if necessary, to build hospitals out of the money supplied by the rates.

In 1879 some attempt was made to tackle the *Housing Problem* of which we hear so much to-day. Local authorities of large towns were given power to buy and pull down the worst of the slum houses. Many of these were the crowded, badly built houses which had been rushed up round the new factories sixty and seventy years before, and they had gone from bad to worse, until now they were filthy, rotten and unsafe.

For over fifty years the Act then passed has been in force, but some authorities work very slowly, and even to-day, in many large cities, behind the wide streets and fine squares, there lurk numbers of these old, filthy, rotten houses—a constant danger to the health of the town and a disgraceful blot on our fair civilisation.

The Housing Problem has been made more difficult in recent years owing to the fact that during the World War, no building and very little repairing was done. This wastage had to be made good. Then people were demanding smaller and more conveniently built houses, and both labour and material were extremely dear after the terrible waste of the War. So the Local Authorities have found themselves faced with the very difficult problems of clearing away their slums and providing numbers of small, well-built houses, not only to replace the slums but to house all the thousands of workers who are demanding such houses.

QUESTIONS

1 What do you mean by "Local Government?"

2 Describe the Local Government of early days.

3 Describe the formation of the Council or Corporation which looks after Municipal affairs.

4 What are its duties?

CHAPTER 16

Freeing the Slaves

In the early days of civilisation it was a common practice for men to make slaves of their weaker brothers. all the ancient empires — Egypt and Babylon, Greece and Rome—kept great numbers of slaves. Men taken in war, women and children captured when their villages were raided or their towns besieged, were often carried away to the victor's country, there to be sold in the slave market and to become the absolute property of the men who bought them.

They worked without pay, often in fear of the task-master's lash. Some of them were lucky and were bought by kindly men who treated them well. Some of them—particularly the Greeks who were carried captive to Rome—were employed on fine work, such as painting and sculpture, but however they were treated they had lost one of man's most valued possessions—his freedom.

It may be that the downfall of these great empires

was due partly to the great number of slaves they kept. The people came to depend so much on the work of these slaves that the free men lost their skill, their pride in work well done, even their energy and strength and so became an easy prey to the stronger, more energetic barbarian tribes who attacked their borders.

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In Britain, the Anglo-Saxon invaders made slaves of the Britons they conquered. Sometimes men who could not pay their debts were taken into slavery with their whole families—and sometimes, in times of terrible famine, people would sell themselves and their families into slavery rather than see their children die of hunger. We hear of the little Angles who were seen by the good monk Gregory in the slave market in Rome, and the boy Patrick was probably captured in a raid on the Welsh coast and sold as a slave in Ireland.

When William I had the Doomsday Book drawn up he found that nine out of every hundred people in the country were slaves. He passed laws forbidding the exporting from Bristol of English boys and girls who were often sold as slaves across the sea, and he did his best to stop slavery in England itself. The buying and selling of slaves gradually died out, but until the middle of the 14th century there were a great number of "serfs" working on the land, whose condition was little better than slavery. The last of these serfs were set free in the reign of Elizabeth.

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But just at that time another type of slavery began.

The New World had been discovered, and Spaniards were flocking there in great numbers. But the climate was too hot for white men to work on the sugar and tobacco plantations. The Spanish settlers enslaved the Red Indians and made them work on the plantations and in the mines, but these men were hunters, not used to the hard work of a settled life, and those who did not escape into the wilds soon died off under the harsh treatment of the Spaniards.

Then someone thought that the negroes of Africa would make the best workers, for they were accustomed to a hot climate in their own land. A few were taken over in Spanish ships, but it was an Englishman, Sir John Hawkins, who started the disgraceful traffic on a large scale.

He began the practice of raiding little villages on the African coast and carrying off the inhabitants to his ships : or sometimes he bought from a native chief prisoners made during a fight with an enemy tribe. Chained together, these poor unfortunates were marched to the coast, packed into the holds of the ships, sometimes so closely that they had only just room to stand, and so kept with very little food or water for the three weeks or a month which it took their tossing vessel to cross the wide Atlantic.

Often half of their number died before they reached America. Those who lived were sold like cattle in the market squares and lived out the rest of their lives under the most cruel conditions, the lash their only reward.

In the years which followed, thousands and thousands of these poor wretches were made slaves in this way, not only in Spanish America, but in the British Colonies of Virginia, Maryland, etc., where the owners of the sugar and tobacco plantations grew rich on this slave labour, and Englishmen, who thought such a lot of their own freedom, felt no shame in depriving their fellow-men of their most priceless possession.

It was the Quaker settlers in Pennsylvania who first raised a protest against the shameful practice. In 1708 they freed their slaves, refusing "to be considered members of the same body with any who held another man in bondage," but it was a long time before the rest of the world began to see the least wrong in it.

At last, in 1772, a law was passed by which any slave who set foot in England became free, but still the merchants of Bristol and Liverpool were adding to their wealth by shipping thousands of negroes into slavery every year. In 1783 a young man named Clarkson won a prize at Cambridge for an essay denouncing slavery. He then determined that it should not be only words with him: he would devote his life to working for these poor unfortunates, so for years he haunted the quays of Liverpool, questioning the sailors: then he published his facts and gained the interest of a number of important people.

But the colonists and the slave traders both worked hard against him, for they were afraid of losing a great deal of their wealth and it was not until 1807 that

British ships were forbidden to carry slaves. But this was not enough for Wilberforce, Macaulay and other men who had given their lives to this cause. For fifteen years more they worked against bitter opposition, until at last, in 1833, they managed to force through Parliament a Bill setting free the slaves in *all* countries flying the British flag. There were scenes of tremendous rejoicing when at last the great day dawned and as the bells rang out from the church towers many thousands of negroes fell on their knees and thanked God for the gift of freedom.

The British Government, anxious to be quite fair to both masters and slaves, compensated the owners, that is, they practically bought the slaves before they set them free. The huge sum of £20,000,000 was generously and freely paid so that this blot should be wiped away and none but free men be found under the British flag.

But in spite of the compensation many owners, particularly the Boers in South Africa, were dissatisfied with the price they received for their slaves. This feeling of discontent rankled for years until it ended in the Boer War.

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The United States of America were, of course, no longer under British control. The Northern States freed the few slaves employed there, but the Southern States, where great numbers were kept on the cotton and sugar plantations, refused to do so.

This led, a few years later, to the outbreak of a

Civil War between the North and South. From 1861 to 1864 it raged, and ended in a complete victory for the Northern States which, under their President, Abraham Lincoln, had so valiantly championed the cause of the slaves. From 1864 slavery was forbidden in the United States.

This American Civil War caused great distress in the North of England, which depended for its work on the raw cotton obtained from the Southern States of America. The Northern States blockaded the ports of the South so that the cotton could not be exported: consequently many mills in Lancashire had to stop work and the people were faced with starvation. But they bore their suffering patiently and gallantly, knowing that on the result of the war depended the fate of thousands of their fellow-men.

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Other European nations soon followed Britain's example and now there are very few, if any, slaves in countries under the control of the white race. But still, unfortunately, there are many thousands of slaves in the world: among the Chinese and among the Arabs in Africa and Asia Minor, this disgraceful practice is still continued and men and women of all countries are working hard to wipe out this blot on the civilisation of the world.

QUESTIONS

1 Write a few lines about slavery in very early days.
2 How did the traffic in negro slaves begin?
3 Describe the work of Wilberforce and others to liberate the slaves.

CHAPTER 17

Helping the Prisoners

While Clarkson, Wilberforce and others were working on behalf of the slaves and Shaftesbury was trying to improve the conditions of the child worker, John Howard and Elizabeth Fry were devoting their lives to the prisoners, whose conditions were just as terrible.

About the time when Wolfe was fighting in Canada and Clive in India, John Howard, an English gentleman, set off for a voyage to Portugal. The ship he was in was captured by the French, and he was cast into prison.

This was quite a new experience for Howard and he was astounded that any place could be so frightful. The room into which he was thrown was dark, damp and dirty, and crowded with men of all types.

There was nothing but filthy straw for them to lie on and for two days they were left without food or water. Then a lump of meat was thrown into the room and the men grabbed, and struggled and fought for it as though they were wild beasts.

Howard was horrified at the thought that any human beings, whatever crimes they had committed, should be kept under such conditions, and when he was set free he began to enquire into the conditions of the English prisons.

He found that they were just as bad as those in France. The rooms were dark, unventilated, undrained, with nothing in them but a little dirty straw. All the food the prisoners received was bread and water, unless they could afford to bribe the jailers to bring them other things. Water for washing was seldom provided. No wonder that in those dark, dirty, evil-smelling holes fever and smallpox were common complaints.

All kinds of prisoners were huddled, often chained, together; young boys and girls, guilty of some slight offence, with hardened criminals of the worst type. The first offenders often came out of prison, having learnt a great deal more evil than they knew when they went in.

Even innocent men were often kept for a considerable time in these foul places, for after they had been tried and declared "Not guilty" they were obliged to pay a "jailer's fee." If they had no money they remained in prison until some friend managed to find the necessary fee.

All this John Howard found out for himself by frequent visits to these dens of misery. He did all one man could do to help individual cases, and by lecturing and writing he tried to rouse public opinion so that Parliament would be forced to remedy this terrible state of affairs. He died in 1790 without seeing much fruit for all his labour, but that labour had not been in vain.

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About twenty years later, Elizabeth Fry, a young Quaker lady who had heard of the terrible conditions in the prisons, obtained permission to visit the women in Newgate Gaol. The governor declared that it was not safe for her to go, but she insisted, and when the door was thrown open she was appalled at the sight that met her eyes.

Over three hundred ragged, dirty women were crowded into that one room: some of them had tiny, frightened children clinging to their skirts; some of them even had babies in their arms. Many of them were quarrelling and fighting, shouting and using the foulest of language: others were stretching their hands between the iron bars of the small window, crying out to the passers-by for alms.

Mrs. Fry was full of pity for these poor creatures. At first they were angry and suspicious and would not listen to her, but gradually her pleasant manner, her beautiful voice and her sweet patience overcame their ill-will and they began to look forward to her visits, and gradually to recognise her as their best friend.

She persuaded the Governor to let her have a separate room for the children, and here other ladies, whom she had interested, came and looked after the little ones, playing with them, teaching them and making them clean, warm clothes.

Meanwhile Mrs. Fry was persuading the women to clean out their room, and when this was done she and her friends helped them to make clothes for themselves. Besides making them more comfortable

this gave the women a new interest and so they were happier than when they had nothing to do but idle the long day away in quarrelling and fighting.

Having gained their friendship she began to read to them the wonderful New Testament story, and through her teaching and example, many of the women turned from their evil ways and led good lives when they were released from prison.

But Mrs. Fry, like John Howard, realised that it was not enough to help individual people. She talked to her friends, made speeches from public platforms, wrote pamphlets, all about the disgraceful conditions of the prisons, and she so stirred public opinion that Parliament at last realised that it must do something about the matter.

So in 1825, with the help of Sir Robert Peel, a law was made which ordered that all prisoners must be provided with proper food and clothing and that the prisons must be kept clean. It was not very much, but it was a beginning: ten years later another law ordered that each prisoner should have a separate cell, and from that time many laws have been passed to improve the conditions under which prisoners have to live.

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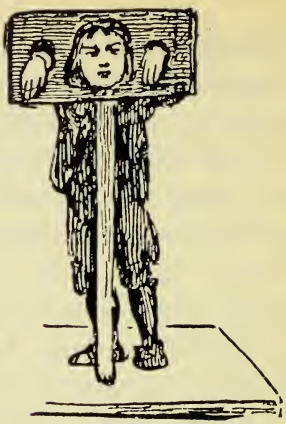
During this same period something was being done to try to lessen the number of criminals who were crowded into the prisons.

Numbers of cruel punishments which had been practised in the less enlightened days of the Middle Ages were still in force.

STOCKS



PILLORY

Every village had its whipping post, where beggars and wanderers were publicly whipped; its pillory and stocks where a man or woman guilty of some offence, such as selling bad meat, or loaves which were under weight, would spend the day, exposed to the jeers and ridicule of the passers-by; its ducking stool and bridle for gossiping women. All these forms of barbarous punishments were still in use at the beginning of the 19th century.

In addition, there were 223 offences which were punishable by hanging!

Damaging trees, stealing a sheep, killing a hare, were among the smaller crimes for which a man could be hanged. Even young children were hanged for small offences.

If a judge did not condemn a man to the gallows, he would sentence him to transportation, which was often worse than death. Hundreds of

prisoners were transported to work like slaves on the sugar and cotton plantations of America, and when the American colonies were lost they were sent the long voyage to the new settlement in Australia.

When Sir Robert Peel became Home Secretary he followed up the work of John Howard and Elizabeth Fry by trying to reform the criminal laws. Between 1823 and 1827 he had two hundred and fifty of these old savage laws repealed. Stocks, whipping posts, etc., were abolished: the number of crimes for which the death sentence could be imposed was reduced to about a dozen, and the terms of imprisonment for other crimes were shortened,

At the same time he organised the London Police.

Up to this time there had been no policemen. A few night watchmen were supposed to keep guard in the streets of London, but they were generally old men who were too feeble for any other work, so naturally they were not of much use if it came to a scuffle with some desperate thief. They had boxes with warm braziers, and in these the old men spent the greater part of their time, just coming out twice each hour, staff and lantern in hand, to patrol a small section of the street and announce the hour and the weather: "Three of the clock and a fine morning." So foot-pads, setting out to waylay people in the dark streets had not much difficulty in avoiding the watchmen.

But when Sir Robert Peel introduced a body of young, strong, well-disciplined men to patrol the streets, criminals found it more difficult to continue in

their evil ways and crime gradually decreased. The new policemen were often nicknamed "Bobbies" and "Peelers" after the man who first organised their force.

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The introduction of street lighting about this time also helped to lessen the amount of crime.

Until the reign of Charles II there were no lights of any kind in the streets. Towards the end of that reign, in 1685, it was ordered that in the main streets a lantern should be hung above the door of every tenth house and for over a hundred years this very feeble and uncertain light was all that the streets possessed. If a citizen had to be out after nightfall he usually employed a "linkboy" who guided him through the dirty and uneven streets by the light of a torch.

But by 1800 the main London streets were flagged, while the side streets were made with "cobble" or "kidney" stones. Then about 1813 gas was first used to light a London street. Its use quickly spread and very soon London and all towns of any size had their streets well lighted after nightfall and the number of street crimes decreased.

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As time went on still further reforms were made in the prisons and in the criminal laws, until now only murder is punishable by death.

As Australia became a more settled country, the colonists began to object to the ship loads of convicts being sent out to them so frequently, so about 1840 Transportation was stopped and the Government had

to find some other way of dealing with wrongdoers.

It was decided to establish convict prisons where criminals serving long terms of imprisonment could be put to some public work. So huge, barrack-like buildings were erected on Dartmoor, at Chatham, Portland and other places and much valuable work has been done by the prisoners in these settlements. Miles of marsh land on Dartmoor have been drained and turned into good pasture; and dockyards have been constructed at Chatham and Portsmouth by these convicts.

But during the last few years still greater efforts have been made to treat criminals like human beings and not so much to punish them as to train them to lead better lives. They are given now every opportunity of doing reasonable work, of continuing their education and of leading healthy lives: good behaviour is rewarded and a well-behaved convict may be set at liberty when he has served three-quarters of his sentence.

All these improvements and the gradual spread of education have greatly reduced the amount of crime during the last half-century.

QUESTIONS

1 Give an account of the work of
   (*a*) John Howard.
   (*b*) Elizabeth Fry.

2 Mention some of the harsh punishments inflicted before the 19th century.

3 What do you mean by Transportation?

4 Mention three or four reforms which led to a decrease of crime in the 19th century.

CHAPTER 18

The Story of the Schools

Part I

Before we say anything about the Education Acts which have made possible the fine schools we have to-day, let us turn back a moment and take a glance at the schools which boys and girls of other days have attended.

In the far away past there were schools in ancient Egypt and Babylon for the favoured few who could pay the high fees demanded by the priests.

The Greeks thought a great deal of education, and the fees there were more moderate so that many boys found their way to some pleasant columned room or courtyard where they were instructed in reading and writing, music and art, mathematics and gymnastics.

The Greek boy went to school in the charge of an elderly slave known as the "paidagogos," who, with a watchful eye and a big stick saw that his charge got to school in time and behaved himself on the way. It was the duty of the "paidagogos" to see that the boy walked and sat properly, wore his clothes in the right way, and behaved politely to his elders.

The books from which the young Greek learned to read were long strips of papyrus or parchment wound round wooden rollers. Gradually unrolling from the

bottom, the boy would make a fresh roll on the top roller as he continued to read.

He learned to write on a wooden tablet coated with wax, making his letters with a metal stylus. When he could write well he was allowed to use a pen made from a bird's quill or a stiff reed, and with ink made from oak galls or cuttle fish he wrote on a piece of fine parchment. He had to write very carefully for parchment was expensive, but he might wash out a little mistake with a sponge provided for that purpose and then smooth over the parchment with a piece of pumice stone.

When he was older he probably found his way to the classes held by such men as Socrates, Plato and Aristotle, who discussed philosophy and other difficult matters with their students and who are still regarded as some of the wisest teachers who have ever lived.

* * * * *

Years later, the Roman boy, as soon as he was seven or eight years old, was also marched off to school by a watchful "paedagogus." The day began early so that in the winter it was often necessary for the "paedagogus" to carry a lighted lantern to light himself and the boy through the dark streets.

The boys sat on benches in the school room, while the master sat on a high chair, a birch-rod or a cane which he used very frequently, ready to his hand. Reading, writing, dictation, arithmetic, had all to be mastered and then came the study of Greek.

Most probably when the Romans came to Britain

they ran schools of this type for their own boys and for the sons of the wealthier Britons, but with the coming of the Angles and Saxons, civilisation and learning were for a time swept away, and it was not until Christianity was re-introduced into England by Columba, Aidan and Augustine, that schools once more made an appearance.

* * * * *

Nearly all the schools for the next few hundred years were monastery schools, and these did a wonderful work in keeping the torch of learning alight in those dark days of war and trouble. But of course only a few boys were able to attend these schools—chiefly the boys whose parents wished them to become priests, and sometimes one son from a royal or noble house. The rest of the lads were too busy working, hunting, or training to become soldiers, to have any time or thought for schooling.

There were a few monasteries like the one at Jarrow in Northumbria, where the Venerable Bede lived and worked, which taught not only boys, but advanced scholars, so that they in their turn were able to go to other lands and spread the knowledge they had gained. Bede, you will remember, was the first man to write a History of England, and he translated the Gospels into the English tongue.

Alcuin, who was a scholar in the high, raftered hall of the Monastery of York, became the headmaster of that school and his fame spread abroad so that Charlemagne, the great Emperor of the Franks, invited

him to come and teach his sons and the sons of his nobles. And the Emperor himself, the greatest warrior and ruler of the age, often listened to the lessons of the Saxon Alcuin, and exercised his wit on some of the "skilful puzzles" of his teacher.

But when the Danes overran England, learning again fell on evil days and Alfred, anxious to start a few schools for his nobles had to send abroad for teachers.

* * * * *

In the early Middle Ages few but priests could read and write, but as the merchants and traders became more prosperous they began to value learning and to wish that their sons should have a chance of gaining a good education.

So more and more of them began to send their boys to the monastery schools which were increasing in number all over the country, and those who showed great talent had the chance of working themselves up until they gained some high position in the state.

The boys of nobles were generally educated at some neighbouring castle, where they became pages at an early age. A priest attached to the house taught them to read and write, and perhaps a little Latin; the page-master taught them deportment, dancing, lute-playing and singing and the duties of a page; but the greater part of their time was spent with the falconer, the huntsman or the master-at-arms, who trained them in the exercise of the knightly arts.

For the sons of poor men there was no chance of education except for the very few who managed to get

into the monastery schools. In fact, until 1406, there was a law by which a villein could be fined for sending his boy to school instead of keeping him working on the land!

But some places were better off than others in the opportunities they offered.

Winchester had for hundreds of years encouraged learning. A small grammar school was founded there about 1382. Some years later William Wykeham, Bishop of Winchester, founded New College, Oxford, and erected a school for seventy boys near Winchester. This set the example and soon afterwards several other schools were started for the sons of rich men. Henry VI founded the school at Eton and King's College, Cambridge.

Of course, in all these schools books were very rare and precious things, not to be entrusted to young boys and careless students. Printing had not yet been invented and it took months of hard work to copy out a book, so naturally there were not many of them.

Children learnt to read from a "horn book." This was a piece of parchment on which the alphabet and a few prayers were written. This writing was covered by a thin transparent piece of horn to protect it, and set in a light frame with a handle, and this was the only "book" which children were allowed to have for many years; most of their work was memory work which they learnt by repeating after their teachers.

Even for older students there were very few books,

they gathered nearly all their information from the lectures of their teachers. And of course the schools and colleges were not the comfortable places they are now. They were very small and the teacher gathered his students together wherever he could—in his bed-room perhaps, or in the arched porch of the church.

* * * * *

Then came the Renaissance which made men realise the value of education; and the Invention of Printing which made books cheaper and more plentiful. When the monasteries were dissolved, under Henry VIII, that king and his son Edward VI used some of the money obtained from them to found Grammar Schools in different parts of the country and wealthy people sometimes left money to start such schools. Dean Colet not only founded St. Paul's School, London, but wrote special school books for his boys—an unheard of thing in those days.

Still for many years little or no provision was made for the education of poorer boys and none at all for girls, though all through the ages there have been a few girls, such as Queen Elizabeth and Lady Jane Grey, who had the help of private tutors and who showed themselves extremely clever.

QUESTIONS

1 Write a conversation between a school-boy of ancient Greece, a boy attending a monastery school, and a school-boy of to-day.

2 Mention three or four men who founded schools in early days and say which schools they founded.

CHAPTER 19

The Story of the Schools

Part II

For nearly two hundred years there was little change in this state of affairs in England, though Scotland had free schools in nearly every parish by the middle of the 16th century.

Then came the Industrial Revolution and more changes occurred in fifty years than in the five hundred previous years. As we have seen Lord Shaftesbury called public attention to the suffering of the children working in factories and mines, and other men began to take an interest in other groups of children.

In London, Gloucester and other big towns there were hundreds of children playing about the streets all day, wretched, dirty, half-starved and absolutely ignorant, learning nothing but evil from companions worse than themselves.

Robert Raikes—a printer of Gloucester, was so grieved at the sight of these poor lads, and the thought of their wasted lives, that he hired a room and invited them to meet him there on Sundays. It was the first Sunday School, but Raikes taught the lads reading, writing and spelling as well as religion—and so, thanks to him, the very poor got their first chance of a little education.

When Raikes had once pointed the way, other kind-hearted men followed, and one or two of these " Ragged Schools " were opened in many big towns.

Then there was the " Dame School " for children whose parents could afford to pay a few pence a week. This was generally run by some elderly lady who took the children in a room of her house and taught them reading, writing and arithmetic. There were other " private schools " which charged higher fees—some of them were quite good but there were others of a very bad type, such as the one Dickens wrote about in " Nicholas Nickleby."

But about the same time two noble and capable men, Joseph Lancaster and Dr. Bell became interested in the children and made other people interested. They not only started schools themselves, but formed societies to collect money from charitable people and to spend it on the building of schools. There was not a great deal of money; the schools were often badly built and very crowded, but these two men and their helpers did wonders under what we should now consider terrible conditions. There were often a hundred or more children in a class and three or four classes in a room. Each class was taught by a boy or girl of thirteen or fourteen with just one older person in charge. However they managed to learn anything under such conditions is a wonder—but they did!

In spite of these three types of schools there were still thousands of children who had no opportunity of

learning anything at all—many of them, as we have seen, working in the mills and factories all day long.

All these schools were run by private individuals or societies, though Parliament had made a small grant to help them in 1833. But it was not until 1870 that the *First Education Act*, introduced by Mr. D. E. Forster, showed that the Government was beginning to take any real interest in this problem. By this Act "School Boards" were to be chosen in each district, and it was their duty to see that schools were built and properly run. Part of the money for these schools came from the rates, the remainder was granted by the Government if the scholars showed at an examination that was held every year, that they were doing good work. These schools were called "Board Schools."

As usual, after the first step had once been taken, the rest was easy and progress was rapid. In 1876 a *Second Education Act* made attendance at school compulsory for all children between the ages of six and twelve. Parents were still expected to pay twopence or threepence a week, but by a third Act in 1891, Elementary Education was made free for all up to the ages of thirteen or fourteen, while "Secondary Schools" were established where bright children could continue their education on payment of a small fee.

In 1902 School Boards were abolished and each town or county area formed an Education Committee to look after all the schools. So Board Schools became Council Schools, and the few National Schools which still remain open are known as Church, or

Non-provided, Schools. These are, however, provided for just as much as the Council Schools, except that the *buildings* still belong to the Church.

In 1903 the *Employment of Children Act* further safeguarded the young people by forbidding their employment in trades which were likely to endanger their health. It was forbidden also that they should be allowed to take part in any street trading or that they should work at night.

In 1907 the *School Medical Service Bill* was passed. This was a splendid move to protect the health of the young people, for by it they were given the free and regular service of a doctor and a nurse and in many cases of a dentist and oculist as well.

In 1918 Lord Fisher introduced another Education Act which provided Nursery Schools for the very little ones, and Continuation Schools for those over fourteen. It also aimed at giving free Secondary education for all. But the country was so poor at that time owing to the wastage of the Great War that the money could not be found to carry out all Lord Fisher's plans.

But as the country recovers its prosperity this Act will be put into force and in the meantime many splendid schools, both elementary and secondary, are being erected, schools which are light, airy and spacious, well built and well equipped and where a splendid type of education, physical and mental, moral and spiritual, tries to make our boys and girls healthy and happy in their youth and to prepare them to

become good citizens of the world whose future is in their hands.

QUESTIONS

1 What do you know of Robert Raikes?

2 What were Dame Schools?

3 Who were the men who first started schools for poor children?
Describe these schools.

4 Mention some of the chief Education Acts and say what they did for the children.

CHAPTER 20

Writers of the 18th and 19th Centuries

We can often gain a good idea of what a period in history was really like, of how its people differed, if they differed at all from ourselves, and of the thoughts that moved them and prompted their actions, by glancing at the writers of the period: these we say, reflect the spirit of the age in which they lived.

We have seen in Book II how Shakespeare, though he seldom wrote about his own time, embodied the bold, daring, lively spirit of the Elizabethan period, when men touched life at many points, and were full of joy and enthusiasm for the world which was opening out before their eyes. Milton and Bunyan portrayed

something of the spiritual and religious struggles which occupied men so much during the next century, and between them they produced some of the noblest poetry and prose of our literature.

During the next period the writers seemed to have little fresh to say, so they devoted their attention to the manner of saying it, and several essayists of whom you may hear later, developed first a clear, simple, and later a polished, elegant style of prose.

In the reign of Queen Anne, Jonathan Swift wrote a book which you all know—"Gulliver's Travels."

A STREET SCENE IN 1750

Children read this as a fairy tale, but Swift did not write for children. The book was a " satire," that is, it held up to ridicule the faults and weaknesses of the men of the period among whom he was living. You might look at this old story again and see if you are clever enough now to discover what the author really meant.

Another story you know well, " Robinson Crusoe," was also written about this time. Its author, Daniel Defoe who lived through the reigns of Anne, George I and George II, also wrote a book describing a " Tour through the whole Island of Great Britain," and this book gives some very vivid descriptions of life in England just before the Industrial Revolution, that is, before the invention of the machinery which changed the whole character of English life.

He gives us pictures of the London " coffee houses," where men met to discuss the news and to drink the newly introduced beverages of coffee and chocolate. Then he takes us with him into the country districts where the roads were nothing more than mule tracks, and most of the rivers had to be forded : he shows us the poor, lean cattle and one field in every three lying fallow ; the hand-loom weavers busy in the cottages, and many other glimpses of early 18th century England.

* * * * *

Towards the end of the century, when revolution was in the air, a distinct change came over our literature, and it again clearly mirrored the spirit of the age.

Poets turned to nature for their inspiration, and they made liberty and brotherhood their themes.

Robert Burns, the ploughboy poet of Scotland, wrote perfect little poems round such simple little subjects as the field mouse, " the wee timorous beastie " whose nest his plough had destroyed. He also wrote stirring songs of liberty like "Scots, wha hae wi' Wallace bled," and poems of brotherhood, such as his famous "A man's a man for a' that."

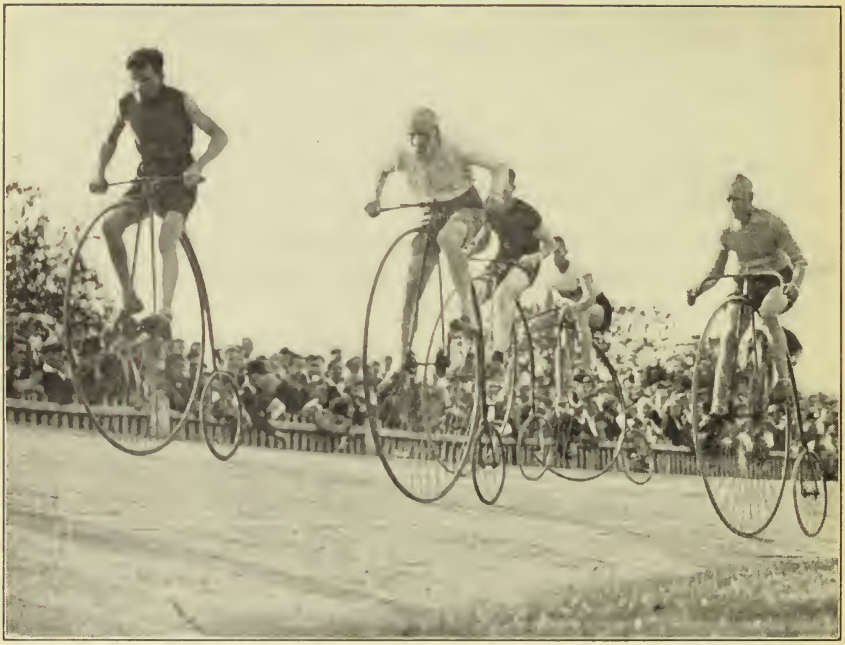
William Wordsworth, who lived in the Lake District was another poet of nature and of liberty. He gloried in the exciting early days of the French Revolution :—

" Bliss was it in that dawn to be alive
But to be young was very heaven."

But he was disappointed when the Revolution seemed to be developing into nothing but a " Reign of Terror," full of violence and bloodshed. So he turned back to nature, and found his delight and inspiration in a " host of dancing daffodils," and the moonlight over the waters of his beloved lakes.

There were many other poets of nature and of revolution at this time—Byron threw himself into the Greek struggle for independence. He went out to Greece and planned to raise and lead a regiment of his own, but he died in 1824 before he had time to do much for the down-trodden little country.

Meanwhile Walter Scott was setting a new fashion by writing long historical poems and historical novels. He took old stories of the past and gave them fresh life : he proved himself one of the greatest story-tellers



EARLY CYCLES

who has ever lived. If you have not read "Ivanhoe," and "Kenilworth" and "Quentin Durward," there is a treat in store for you. You may think the early chapters a little difficult and tedious, but once past these you will find the books packed with romance, thrills and adventures.

Queen Victoria had come to the throne and a new age born of the Industrial Revolution had begun before William Makepeace Thackeray began to write. He was another fine story-teller, and in "Henry Esmond," "The Newcomes," and "Vanity Fair," he drew

pictures of the men and women of the upper classes among whom he lived, pictures so perfect that as we read, the people seem to come alive.

What Thackeray did for the wealthy classes Charles Dickens did for the poorer, humbler folk.

* * * * *

Dickens himself had a hard boyhood. His father was imprisoned for debt, so Charles while he was still quite young had to work long hours in a blacking factory—a miserable place where he met many rough and evil characters.

A little later family affairs improved and Charles was able to go to school for a short time. He then went to work as an office boy, and afterwards got a job as a reporter for a newspaper. Soon he began to write short stories and little sketches of some of the people he had met. These " Sketches by Boz," as he called them, were quite popular; then he started to write the " Pickwick Papers," and so launched out on his career and became one of the most famous of all our story-tellers.

Not only did Dickens give us good stories with a wonderful gallery of men and women who seem to live and move but he also attacked many of the evils of his day, and by drawing public attention to them in his widely read books, he did a great deal towards getting the evils removed. In " Nicholas Nickleby," he drew attention to the disgraceful conditions existing in a certain type of private school where masters like

Squeers neglected and ill-treated the boys. In " David Copperfield " he showed up the evils of the workhouses : and in " Little Dorrit " the foolishness of imprisoning a man and his family for debt. But though these evils have to a great extent been remedied, Dickens' books are still enjoyed for their splendid character drawing and lively stories.

About the same time Mrs. Elizabeth Browning wrote among many other beautiful poems, " The Cry of the Children " which called public attention to the wickedness of keeping little children working in the mines and factories.

Robert Browning and Alfred Tennyson were two famous poets of this period. They both started to write when they were quite young boys and continued to write fine poetry which is still much loved and admired. Tennyson was made Poet Laureate, was given a peerage and when he died was buried in Westminster Abbey.

There were other important writers of this time whom we must pass by, but we must not forget our old friend Charles Kingsley. His " Water Babies " has given delight to several generations of small children, and his historical novels " Westward Ho ! " " Hereward the Wake," etc., to those children as they grow older. Like Dickens, Kingsley was also a social reformer. In " Water Babies " you remember, he exposed the miseries of a poor little chimney sweep. In " Alton Locke " he showed up the wretched conditions under which the London tailors worked, and

in "Yeast" he pleaded the cause of farm labourers. He became a clergyman and he worked hard to obtain better homes and shorter working hours for his people.

Towards the end of the century a great tragic novelist, Thomas Hardy, was writing: his books give us many a picture of life in rural England at that period. At the same time the delightful Robert Louis Stevenson was producing "A Child's Garden of Verse," and the lively adventure yarns "Treasure Island," "Kidnapped," etc., which everyone loves even to-day. And Mr. Dodgson, better known as Lewis Carroll, was writing his famous "Alice in Wonderland."

During these same busy years "Peter Pan" appeared, and James Barrie his creator wrote lovely stories about life in Scotland, and clever plays which still delight audiences all over the world.

About five years after the birth of Barrie, Rudyard Kipling was born in India. His "Jungle Books," "Just So Stories," and "Stalky and Co." are a constant source of pleasure to boys and girls, while "Kim," "Captains Courageous," "Plain Tales from the Hills," interest all types of readers and give a glimpse of life in India at the end of the nineteenth century. His "Recessional," written for Queen Victoria's Diamond Jubilee, brought him fame as a poet.

We have not room to say much about the men and women who are writing to-day; it would be interesting to find out from your general reading how far these writers portray the life and spirit of this present age.

QUESTIONS

1 How many of the books mentioned in this chapter have you read? Give a short account of one of them.

2 Mention some of the evils of the 19th century which (1) Dickens, (2) Kingsley, (3) Elizabeth Browning exposed.

3 See if you can find from some of these books, passages which give pictures of life during the 19th century.

4 Compare these with descriptions from modern books, which give pictures of life to-day.

CHAPTER 21

Our Rulers

We have noted that when James II fled from the throne, Parliament offered the crown to his daughter, Mary and her husband, William. They ruled jointly until Mary's death, then William III ruled alone.

They had no children, so Mary's sister Anne, became Queen when William died in 1702. It was during this reign that the Parliaments of Scotland and England were first united (1707).

Anne had no children, so towards the end of her reign there was great discussion as to who should succeed her. Many people, particularly in Scotland and in the North of England, wished to bring back the Stuarts, for the son and grandson of James II were both living in exile on the Continent. These people, you will remember, were called "Jacobites."

But the majority of people did not want the Stuarts back again, so they looked elsewhere for a king. The nearest heir to the throne, apart from the Stuarts, was George of Hanover, whose grandmother, Elizabeth, was the daughter of James I, so this German prince became King of England as George I, in 1714. He could speak no English and was not interested in the government of his new country, so the leadership of Parliament passed from the King to a Prime Minister.

In 1715 there was a Jacobite Rebellion in favour of James Edward Stuart, who was called by his enemies the " Old Pretender."

In 1727 George II, a vain, fussy little man, very fond of money, succeeded his father. Both these kings were more German than English : they were not liked by the people, but as they did not interfere in the government of the country the people put up with them for the sake of peace. From this time onward the country was governed not by its kings but by its Parliaments and their ministers, the chief of whom at this time was William Pitt.

During this reign Wolfe captured Quebec and Clive laid the foundation of our Indian Empire. (See Book II).

There was another Jacobite Rebellion in 1745, when Bonnie Prince Charles, the Young Pretender, landed in Scotland, gathered an army together and marched down the country in triumph as far as Derby. But the English did not want another civil war : they

refused to rally to his standard, and so instead of pushing on to London the Prince retreated to Scotland.

His army was utterly routed at Culloden Moor, and he himself was for weeks a hunted fugitive among the mountains and islands of Scotland. But though there was a big price on his head, no one would give up the daring young prince and finally, with the help of Flora Macdonald, he escaped to France.

* * * * *

George II was succeeded in 1760 by his grandson George III. This prince had been born and brought up in England, and he tried to get back some of the power which he thought should belong to a King. But his attempts to interfere with the government were generally disastrous.

It was largely owing to him and his stupid ministers that we lost our American Colonies which, after the Boston Tea Party, broke away from England, and declared their independence. In 1776, they formed a Republic, the United States of America, with George Washington for their first President. (See Book II).

Later, William Pitt, the Younger, became one of the chief ministers and led the country to prosperity.

It was during the long reign of George III that many of the changes of which we have been reading began. Actually the Agricultural and Industrial Revolutions had begun a little earlier but most of their important developments took place in this reign.

It was in this reign that Squire Coke did so much for farming and the King himself, who was so interested

in agriculture that he was often called "Farmer George," started a model farm at Windsor. The drill plough, the sowing machine, the reaper, the thresher, were all invented or improved during these years.

The King had not been on the throne a year when the first canal to be made in England, the Bridgewater Canal, was opened. Hargreaves, Arkwright, Crompton, Cartwright, Watt, were all busy inventing their machines which were to turn England into an industrial country, and make a great part of the population move from the south to the north. The first British steamboat was seen on the Clyde in 1812.

In this reign too, the French Revolution broke out, and England was drawn into the war with Napoleon. Nelson and his fleet saved us from invasion, though to the great grief of the country the hero lost his life at the battle of Trafalgar, in 1805. Wellington led the army to final victory on the fields of Waterloo, ten years later.

SIR ROBERT PEEL

In 1820 George III, who had been out of his mind for some years, died and his son George IV reigned for ten years. During his reign the Greeks gained their independence and Sir Robert Peel managed, after

much opposition, to have the laws against Roman Catholics repealed.

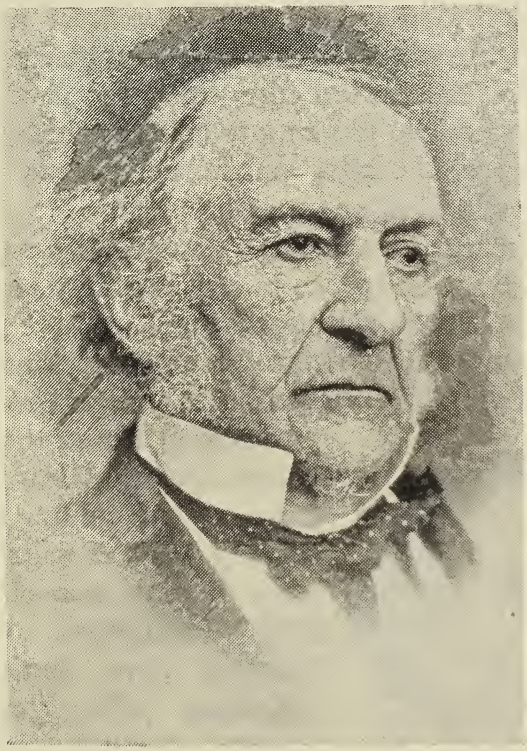
George IV's brother, William IV came to the throne in 1830. He was a bluff, hearty old gentleman who tried to make himself popular by walking about the streets of London and mixing in a most familiar way with his subjects. He had been sent to sea at the age of 14 and in his young days was known as the Sailor Prince. In his reign many of the reforms and improvements, made necessary by the new industries, came into force. Parliament was reformed in 1832, Slavery abolished and the First Factory Act passed in 1833, while the new Poor Law came into force in 1834.

William IV died in 1837 and was succeeded by his niece, the Princess Victoria. She was only a girl of eighteen at the time, very small, but full of dignity and grace and she quickly won the love and respect of her people.

For a few years she was guided in matters of state by her wise and capable Prime Minister, Lord Melbourne. Then she married her cousin, Prince Albert, a good and clever man some years older than herself, who was able to advise and help the girl-queen in many ways.

He was given the title of "Prince Consort," but for a long time he was not very popular with the people who distrusted him simply because he was a foreigner. But he thought only of the happiness of his Queen and the good of England and all his life he worked unsparingly for both—keeping himself in the background

and never looking for reward or praise. He died in 1861 and the Queen who had loved him dearly, mourned him for many years.



W. E. GLADSTONE

In 1840 the Penny Post was introduced by Rowland Hill. Until this date the price paid for sending a letter varied according to the weight of the letter and the distance it had to travel: it might cost as much as a shilling to send a letter from Liverpool to London.

Many people argued that there would be a great loss if the charge was so little as a penny, but Sir Rowland Hill showed that many more people would write letters if they could send them so cheaply. Time proved that he was right and very soon thousands of letters were being sent where only dozens were sent before. Stamps too were introduced at this time, for it would have taken the postmen too long to collect pennies for every letter, and about 1855 pillar boxes made their first appearance in London streets.

(The charge for sending a letter was changed from a penny to three-halfpence in order to raise more money during the World War, 1914-1918).

In spite of the Indian Mutiny, the Crimean War and the Boer War, Victoria's long reign was a time of great and glorious progress. The Queen and the Prince Consort had a good influence on the country and the reign produced many famous men of all types. Peel, Palmerston, Gladstone, Disraeli, were some of the statesmen who guided the country through these years during which many steps were taken to improve the condition of the workers. The Mines and Factory Acts, the Second Reform Act (1867), the Education Act (1870), the Ballot Act (1872)

DISRAELI

QUEEN VICTORIA

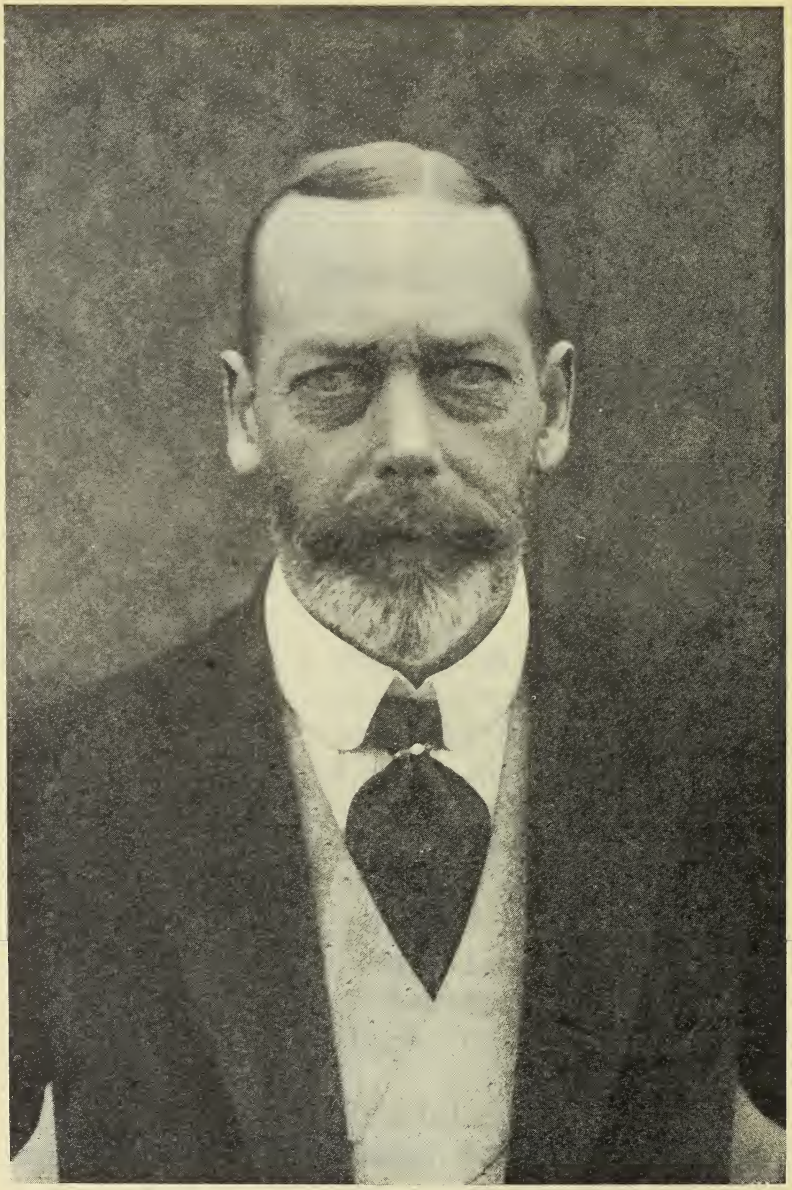
KING EDWARD VII

and others gradually did away with the evils under which the people lived and worked at the beginning of the century.

Queen Victoria died in 1901 at the age of 81. She was succeeded by her son Edward VII. "Edward the Peace Maker" was the proud and honourable title which he won by his efforts to keep restless Europe peaceful and friendly. He and his wife Queen Alexandra, were respected and honoured all over the world.

During his short reign great scientific progress and many inventions were made: machines and engines of all kinds were improved and speeded up. Motor cars, submarines and aeroplanes appeared for the first time.

Edward was succeeded in 1910 by his son George V, who as a boy had been trained for the sea. He gained



KING GEORGE V

a knowledge of the Colonies by taking a long tour round his Empire before he came to the throne, and he has always kept in close touch with his people. He and Queen Mary and the whole of the Royal Family, particularly the Prince of Wales, are loved and respected throughout the world.

During this reign the country was unfortunately drawn into the worst and greatest war in the history of mankind, but by degrees it is recovering from the terrible effects of this war and is going on valiantly with the work of the ages, striving to lift, not only this country, but all mankind, on to a higher level of civilisation, in which all men will be able to live decent, full and happy lives.

QUESTIONS

1 How was it that a German Prince, George of Hanover, became King of England?

2 Describe the two Jacobite Rebellions.

3 What great events in our Empire story took place in George II's reign? See Book II.

4 Make a list of some of the chief events of George III's reign.

5 Make a list of some of the chief events of Victoria's reign.

PART III
The Modern World

CHAPTER 22
The Story of Turkey and Egypt

I

Most of this time we have been thinking only of England. Let us now see how this busy period of invention and change affected the rest of the world.

As we have seen, most of the early inventions in machinery were made in England, and so this country got a good start in the race for industrial prosperity. But very soon other nations began to buy machinery from us. Then they made similar machines and in many cases improved on the earlier ones, so it was not very long before the whole of Western Europe and America were having Industrial Revolutions like our own.

Men began to gather more and more in big cities; trade developed; railways opened up the country and joined up one part with another; men were thus brought into much closer touch with each other and exchanged not only goods but ideas.

One result of this was that, as in England, the people began to demand a greater share in the

government of their country—that is, there was a movement towards *democracy*.

We have seen how the French put up their struggle for democracy in their terrible Revolution of 1789.

After the final defeat of Napoleon in 1815 the old Bourbon family was restored to the throne by the powers of Europe, but the people of France were not satisfied. There were further Revolutions in 1830, 1848 and 1875. After this the Third Republic was established and France at last settled down for a short time of peaceful development.

Another result was that some of the small states began to realise that they would have a better chance of improving both their government and their trade if they combined with neighbouring states inhabited by people of the same race as themselves, and formed a nation: that is, there was a movement towards *nationality*.

Sometimes this struggle to form a nation meant that neighbouring states had not only to settle their own little rivalries and unite, but that they then had to fight to throw off the rule of some conqueror of alien race who had overrun their land in bygone days.

* * * * *

For instance, the Mohammedan Turks, an Asiatic people, who as we have seen, captured Constantinople in 1453, gradually conquered more and more of Eastern Europe until their advance was stopped by that great soldier and patriot John Sobieski, King of the

little country of Poland, just about the time when William III was settling on the English throne.

For the next hundred years Mohammedan Turkey continued to rule over the Christian states of the Balkan Peninsula—Greece, Bulgaria, Serbia, Roumania, and there was much misery and dissatisfaction. So when this movement towards nationalism began to spread over Europe, first one and then another of these states put up a fight for its independence.

For nine long years the little country of Greece struggled valiantly against the much greater power of Turkey, and finally, in 1830, with the help of England and France, it won its independence.

During the next few years the other peoples of the Peninsula followed the example of Greece. Serbia, Roumania, Bulgaria, Montenegro broke away and formed independent states, while Austria gained control of the western part of the country.

Turkey still retained possession of the district round Constantinople but its Empire was rapidly breaking up. The Balkan Peninsula was now divided between eight different powers: Turkey was the "Sick Man of Europe," and Russia was anxious to see him die, for she badly wanted to gain the outlet to the sea which the possession of Constantinople would give her.

England and France, jealous of Russia's growing power, did not wish that country to gain control of Constantinople and sometimes, as in the Crimean War these two nations went to the help of Turkey.

So the Balkan Peninsula remained the storm centre of Europe, for not only were there all these racial quarrels, but the Mohammedan Turks often ill-treated and murdered the Christians over whom they had control. Wars and insurrections were constantly breaking out; the government under despotic Sultans was bad: the people were heavily taxed, and the country was very backward, for no modern improvements could be introduced.

At last, a revolution of the "Young Turks" some of whom had been educated in Western Europe,

CONSTANTINOPLE (NOW ISTANBUL)

paved the way for a few changes, but the Christians were still ill-treated, and the unrest continued.

When the great World War began, Turkey joined Germany and Austria, and when the war ended, she lost all her European possessions except a little strip of land round Constantinople. That famous and much desired city is now controlled by the League of Nations and is called Istanbul. The capital of Turkey is Angora in Asia Minor, but some of her European territory has since been restored to her.

Several other changes have been made in the Balkan States as a result of the war, the most important being the uniting of Serbia, Montenegro, and the Dalmatian coast to form the country of Jugo-Slavia.

II

Egypt was another country which began to develop during this period.

You will remember that one of the earliest civilisations grew up in the valley of the Nile, and for hundreds, perhaps thousands of years, Egypt was one of the greatest Empires of the World. Then the Empire decayed and with the closing of the trade route to the East when the Turks captured Constantinople, its trade decayed also: Egypt itself was overrun by the Turks and for hundreds of years took no part in world affairs.

It was Napoleon who first aroused modern Europe to the value of this country. He wished to break up

the British Empire in the East, and he saw that it would be a great help if he had control of Egypt and the Red Sea. So he sent out a big force, but his plans were brought to nothing by the British navy under Nelson, who defeated him at the Battle of the Nile.

But the French kept their interest in Egypt and in 1869 a French engineer named *de Lesseps* after much trouble and many difficulties, managed to cut the Suez Canal. This was a tremendous and wonderful undertaking, which shortened the route to India and the East by at least three weeks.

At first, people in Britain would have nothing to

PORT SAID *Photo*. Zaugaki

do with the scheme and it was chiefly French and Egyptian money that made it possible. But as soon as the canal was opened it proved an immediate success and Britain realised what a mistake she had made in not having a share in it.

Then the Khedive or ruler of Egypt, through bad management and bad government, went bankrupt and was anxious to sell his shares in the Suez Canal. A number of people in England still would have nothing to do with it, but Disraeli, who was Prime Minister, got his way and bought all the Khedive's shares for England. Otherwise France would have bought them and so have gained complete control of the canal.

The government of the Egyptians continued so bad that France and Britain set up a " Dual Control " to help them manage their affairs in a better way. But the following year there were riots against the foreigners and cries of " Egypt for the Egyptians." France left most of the business of putting down these riots and protecting the Europeans, to Britain, who sent out a regiment of soldiers and gradually gained the chief control of Egypt.

Then came further trouble : the Sudan, a large country lying to the south-west, had been badly ruled by Egypt for over sixty years : now its people, too, were longing for independence, and under a Mohammedan leader called the Mahdi, they rebelled. General Gordon was sent out to help to withdraw the Egyptians from the danger zone, but he was shut

THE STATUE OF GENERAL GORDON IN TRAFALGAR SQUARE, LONDON

up in Khartoum, and before help could reach him he was murdered by the followers of the Mahdi, to the horror and grief of the British who regarded Gordon as a hero of heroes.

Some years later Kitchener defeated the Sudanese at Omdurman (1898) and brought the Sudan under the joint rule of Egypt and Britain, and Lord Cromer, who was the British representative in Egypt, advised and guided the Khedive so well that the country gradually regained its prosperity. Cruel punishments were forbidden, irrigation works were started and many modern improvements in education, transport,

government, etc., were made, so that to-day Egypt is as prosperous and well developed as many of the European Powers.

It now has a King of its own and is practically independent, while the Sudan is ruled by a Governor-General, appointed by Britain.

QUESTIONS

1 What do you understand by

(*a*) A movement towards Democracy.

(*b*) A movement towards Nationality.

2 Give a short account of the Turks in Europe.

3 Write a short account of the development of Egypt.

4 Who constructed the Suez Canal? What have been the advantages of that canal?

CHAPTER 23

The Story of Italy and Spain

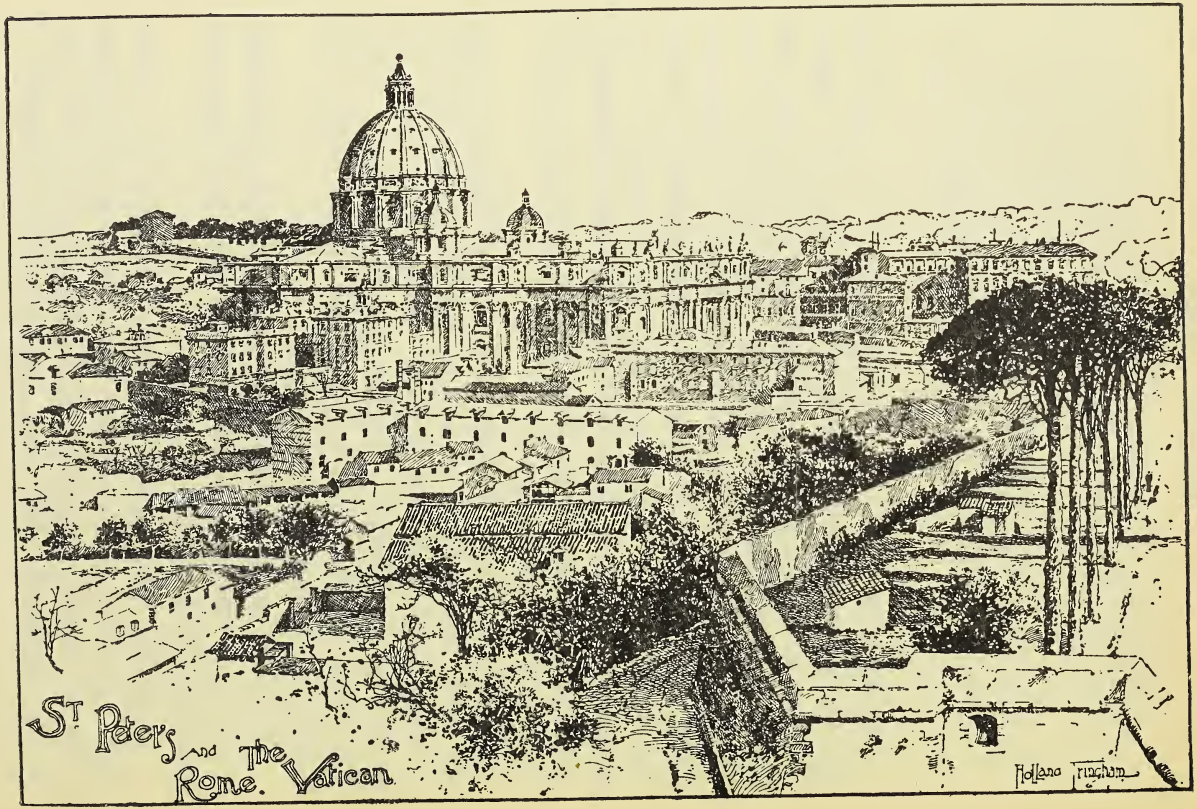
I

As we have seen, ideas of nationalism were spreading all over Europe during the first half of the 19th century. In 1830 the little country of Belgium broke away from Holland and formed a separate kingdom of its own. The year 1848 is often called the year of revolutions: there were cries of "Italy for the Italians," "Poland for the Poles," "Germany for the Germans:" the peoples everywhere were anxious to throw off foreign rule, to combine as nations and to have more share in their own government.

We have heard a great deal about Rome through the ages, but nothing of Italy: there was no kingdom of Italy until long after 1848. Rome was under the control of the Pope: Naples and Sicily had a king: Piedmont and Sardinia had another king: Venice and Lombardy belonged to Austria.

But now many of the people in the peninsula thought it was time they combined as one nation and drove out the hated Austrians.

A young man named Mazzini, formed the "Young Italy" society, and worked whole-heartedly throughout a life of danger, imprisonment and exile for the unity of his country. He was supported by Cavour, a


St Peter's and the Vatican
Rome.
Holland Tringham

statesman of Piedmont, by Victor Emmanuel, King of that country, and later by a brilliant young soldier named Garibaldi, who organised and trained an army of "Red Shirts."

Cavour worked first to put Piedmont in good order, giving it a system of government similar to that of England. Soon it was looked upon as a model state; its people were free and prosperous, the envy of other states which were under a more tyrannical rule.

There were many years of fighting before their ideal of a United Italy was realised, for though the *peoples* wanted unity, the *rulers* of the different states naturally did not, for it would mean that they would lose their authority and power.

First the Austrians were driven out of Lombardy; then Garibaldi conquered Sicily and Naples, whose King had been holding out against the Union. By 1861 Victor Emmanuel was recognised as King by all Italy except Venice and Rome. Ten years later these two provinces also joined the Kingdom, and so Mazzini's dream of a united Italy came true.

* * * * *

When the Great War broke out Italy was bound loosely by a treaty with Austria, but the Italian people regarded Austria as their ancient enemy and were more anxious to fight against that country than with it. For some time Italy remained neutral but in 1915 she joined the Allies on condition that the Tyrol and the Dalmatian coast should be taken from Austria and given to her.

PREMIER MUSSOLINI OF ITALY

After the war Italy escaped much of the unrest and trouble which other nations suffered, because a strong man Mussolini soon managed to get control of affairs. He formed a small party which he called the "Fascio," a word which comes from the Latin "fasces:" an ancient Roman badge or symbol, a bundle of rods tied round an axe. Mussolini and his Fascists in their black shirts soon gained the confidence of the people. He marched on Rome and had himself declared Prime Minister, responsible to the King alone. This made him a Dictator, with almost absolute power and he has used his power to promote the welfare and prosperity of his country.

II

In the far away days of the past, Spain was colonised by people from Carthage and Rome. Later the northern part was overrun by many barbarian tribes, who, as time went on settled down under different

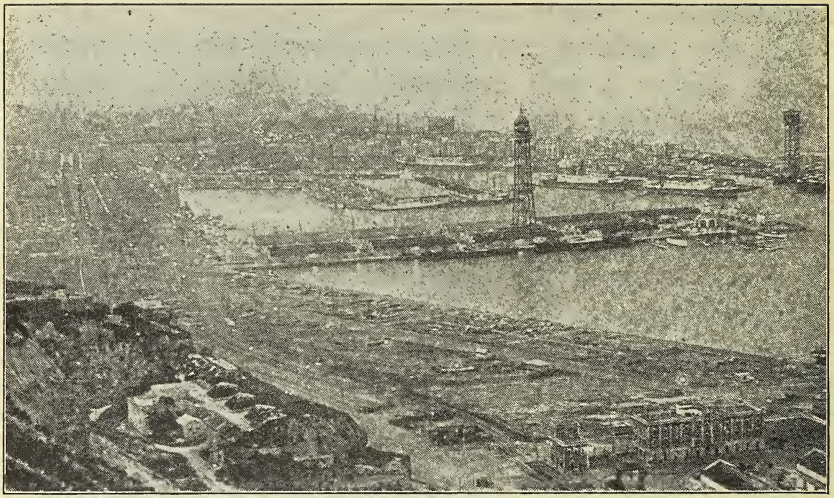
princes and became Christians. Then about the year 711, the southern part was conquered by the Moors from Africa, a well developed Mohammedan people, who cultivated the soil, built beautiful cities, and introduced many of the arts of civilisation.

Very soon, however, the Christians and the Mohammedans came into conflict with each other, and the struggle between them lasted for over seven hundred years. The Moors were gradually driven back until they possessed only a small kingdom round their grand old city of Granada.

Then in 1469 Ferdinand, King of Aragon, and Isabella, Queen of Castille married and so united most of Spain under a single rule. Then began the day of Spain's greatness. In 1492 the Moors were finally conquered and driven out of Spain. In the same year Columbus discovered America, and thus, owing to the foresight of Isabella in aiding him, added a large part of the New World to the Spanish crown.

The treasure discovered in the New World was poured into the coffers of Spain and during the next few years that country developed into a great Empire, conquering not only a large part of America but also Italy and the Netherlands and becoming overlord of the German States. When Elizabeth came to the English throne Spain was the Mistress of the World.

Soon afterwards the Empire began to decay. The despotic rule of Philip II (husband of the English Queen, Mary) caused discontent at home, and the harsh rule of his successors caused revolts in the



BARCELONA HARBOUR AS SEEN FROM THE HEIGHTS

Colonies. Spain lost all her European and most of her American possessions and gradually sank to the level of a third-rate power.

Until the year 1812 the country was ruled by an absolute king, but about that date, when Wellington was helping the Spaniards to drive out the armies of Napoleon, a Parliament or Cortes was formed which tried to give some of the people a share in the government. But the king and the army would not agree to go very far in this direction and the struggle between the two parties was long and bitter, lasting well over a hundred years. During this period there were many revolutions and the country sank into a very backward state.

* * * * *

MADRID

Spain took no part in the Great War, so while other nations grew poor she began to grow rich. She was still ruled by a government quite out of touch with the wishes of the people, and not capable of ruling wisely. The King, Alfonso XIII, saw how poor the government was and tried to get all the power back into his own hands. In 1923 he refused to allow the Cortes to meet: the King and one of his generals, Primo de Rivera, ruled the country absolutely.

Things began to improve: the old mule tracks were replaced by good motor roads: new railroads were built: trade and industry improved. But soon the people grew tired of the dictatorship of de Rivera.

In 1929 he was put out of office and there were cries of "Down with the King." In the next two years the Republican party grew in strength and in 1931 Alfonso was obliged to abdicate. The Revolution, for such it was, passed off fairly peacefully; only about 60 persons were killed, and the King and his family were allowed to leave the country unmolested.

A Republic was declared, a Parliament consisting of only one House elected by all men and women, took charge of affairs and brought about many necessary reforms.

QUESTIONS

1 What do you know about
   (*a*) Garibaldi.
   (*b*) Victor Emmanuel.
   (*c*) Mussolini.

2 Write a short "Story of Spain."

CHAPTER 24

The Story of Germany

Just as there had been no such country as Italy, neither was there a country of Germany at the beginning of the nineteenth century. There was simply a collection of states of which Prussia and Austria were the chief, and the conditions under which the people lived were worse than those in France before the great Revolution of 1789. But the spirit of that

Revolution quickly spread in Prussia: the serfs were freed, education was improved, and the army strengthened.

Then in 1848 there were various revolutions of workmen and students who demanded freedom of speech, a free press and equal laws for all, but they were put down by the army, for the Prussian King and his chief ministers did not approve of democracy.

"Not by speeches and majority votes are the great questions decided," said Bismarck, "but by Blood and Iron." He meant to say that in Prussia the Army was to be the chief force, the chief authority.

So Prussia fought against her chief rival Austria and conquered her. Most of the other states then joined Prussia, who next, in 1871, made war on France, and defeated that country also, marching right up to Paris and besieging it. When peace was made France was obliged to pay a huge sum of money, and give up a border state, Alsace-Lorraine, to Prussia. This harsh treaty caused great hatred between the two countries, a hatred which bore bitter fruit forty-three years later.

Before Bismarck withdrew from Paris he saw his great dream realised for in the beautiful French palace of Versailles, William I, King of Prussia, was hailed as Emperor of a *united Germany*.

Quickly this new Germany grew in wealth and power. Her people had a great keenness for education, they were hard-working and well-disciplined, and in a very short time the country had become one of the

leading nations of the world, a position which she would have held to-day had not the selfish ambition of her Emperor, William II and of her army leaders led her to defy the world.

The World War of which you will read in Chapter 27 broke out in 1914. By November, 1918, the people of Germany were beginning to realise with despair that their armies were beaten and their country ruined. They rose against their old leaders, and it appeared as though their country was on the verge of a civil war.

The Emperor, William II, was persuaded to abdicate, but it was too late to save the government.

Bavaria broke away from the Empire, declaring itself a "free republic of Soldiers, Workers, and Peasants' Soviets." A general strike broke out in Berlin : a republic with a moderate Socialist government

UNTER DER LINDEN, BERLIN *Photo:* Firth & Co., Reigate

was set up under Ebert, a man who had been a saddler in Heidelberg. Only fifteen men were killed in Berlin in this Revolution, but with them fell the Hohenzollern family which for five hundred years had ruled Prussia with an iron hand, and had united the German States into a nation.

The first business of the new government was to sue for peace. The country was on the verge of starvation, and was only saved by the relief work of the American organisations.

But though the war was brought to an end the new government was not allowed to get on with its work in peace. Rebellions and revolutions followed each other in quick succession: the Communists were not satisfied and wanted to carry out more sweeping changes: the southern states were jealous of Prussia, and wished to limit her power; over a thousand lives were lost in these rebellions before the harsh terms of the Treaty of Versailles were made known: then all Germans dropped their private differences and rallied horror-stricken round the government.

A Constitution was drawn up which declared that a Parliament or "Reichstag," should be elected to rule the country, and that all people should have equality of opportunity and liberty of speech and worship.

This government might have been successful but for the impossibility of meeting the heavy reparations. The country went bankrupt: its paper money was worthless: it could not pay its debts to France, so

ten thousand French troops were sent to occupy the Ruhr, Germany's richest industrial area.

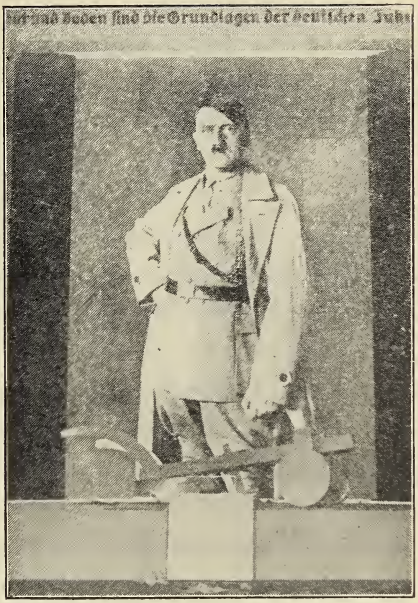
The Germans were furious. This action of the French government re-aroused all the racial bitterness and hatred, which the young people of both nations had been trying to overcome: and since their richest coal and iron fields were thus taken from them the Germans could not raise the money that France was still demanding.

At last everyone saw that this could not go on. France agreed to withdraw her troops from the Ruhr, and England and America lent money to Germany so that she could re-open her big works, and so make more money to pay her debts.

Trade began to revive, but the people had to work extremely hard and they remained miserably poor. At last the young people started to ask themselves why they should thus suffer so long and so hopelessly for the crimes of their fathers, and rebellions began to break out again.

Soon after the war the "Youth Movement" had been an International one, that is one which aimed at breaking down the barriers between nations, and at establishing a brotherhood of men which would lessen the chances of future wars. But now, despairing of ever clearing off their enormous debt or of being given an equal chance with other nations the young people of Germany began to forget this ideal. They rallied round a new leader, Herr Hitler, who formed a National Socialist party, the aim of which was to restore German

prosperity, German unity and German glory at any price. Jews and all people of alien race were harshly treated and when possible driven from the country. "Germany for the Germans," was the ideal of the Nazis, as the followers of Hitler were called.



HITLER

By 1934 Hitler and his Nazis had established a strong government which may be able to give the country peace, and an opportunity to work out her own salvation. But unfortunately the spirit of militarism has been revived, while the Internationalism of the Youth Movement seems to be dead. The world watches with anxious eyes lest Germany as she regains her strength should return to the old "blood and iron" doctrine of Bismarck and William II.

QUESTIONS

1 What did Bismarck do for Germany?

2 Give some account of modern Germany.

CHAPTER 25

The Story of Russia

The great country of Russia which stretches from the Baltic Sea to the Pacific Ocean, has, all through the ages, been more backward than the rest of Europe. The famous Tsar, Peter the Great, who began to rule about the same time as our William III found it a half barbarous country. Anxious to introduce into his land something of the culture of Western Europe, Peter travelled in France, Holland and England to learn all he could. He even apprenticed himself to a ship-builder, and became a good ship's carpenter before he went back to his own land and organised the building of dockyards there.

He realised that Moscow, in the very heart of a vast country, frost bound for many months of the year, was not a good capital city. He wanted an outlet to the sea; so he went to war with Sweden, captured a strip of land on the Baltic coast and set to work to build a new capital among the bogs and marshes at the mouth of the River Neva. This town of St. Petersburg, now Leningrad, gave him a "Window looking out on Western Europe."

The next important ruler of Russia was Catherine the Great. She, too, was anxious to gain an outlet for her country, and managed after a severe struggle, to

capture the Crimea from Turkey: thus she gained a southern port on the Black Sea, which had the advantage of never being frozen. In Catherine's reign too, there began that "Partition of Poland" between Russia, Germany and Austria, which was to cause so much trouble during the next hundred years.

Catherine died in 1796, just about the time Napoleon Bonaparte was starting out on his victorious career. Her successor was for a time an ally of the French but later turned against them, and when Napoleon tried to add Russia to his growing Empire, the people of that country burnt Moscow to the ground rather than let it fall into the hands of the French. Napoleon found only a smouldering ruin instead of the reserves of food he had hoped to find, so he had to march his vast army back across the barren and frozen Russian plain. He lost thousands of men, and this "Retreat from Moscow" was the beginning of his downfall.

* * * * *

But in spite of the reforms of Peter and Catherine, Russia was still a very backward country. The peasants were still serfs, bound to the land as they had been in England four hundred years earlier: they were very poor and quite uneducated. It was not until 1861 that these serfs, numbering about ten million, were set free, but even then they were still crushed by heavy taxes.

Other reforms followed slowly, and as education spread the people began to get more discontented with their hard lot and to rebel against the tyranny of their

rulers. For the Emperors or Tsars of Russia were still autocratic—believing in their "Divine Right" as strongly as Charles I had done in England two hundred years before. Even as late as 1894 when Nicholas II ascended the throne he could not see that the world had changed greatly in those two hundred years. He spoke of his people's desires for reform as "senseless dreams," and if any one voiced his discontent too strongly he was put to death, or exiled, or marched across the frozen plains of Siberia to work in the salt mines—a punishment worse than death.

* * * * *

But meanwhile many of the younger Russians were getting into touch with Western Europe, and they did not see why they should not have the same liberty and a share in the government as the people of England and France and Germany had. Many of them were particularly influenced by the writings of a man called Karl Marx.

Karl Marx was a German Jew but he lived most of his life in London. Here he wrote a book called "Capital," in which he said that as inventions and manufactures increased, the rich would get richer, and the poor poorer. He argued that the masters who had the capital, that is the money, grew rich and powerful at the expense of the workers, and that the time would come when the workers would have to unite, drive out capitalists and run their works themselves.

Such a doctrine suited a people rebelling against

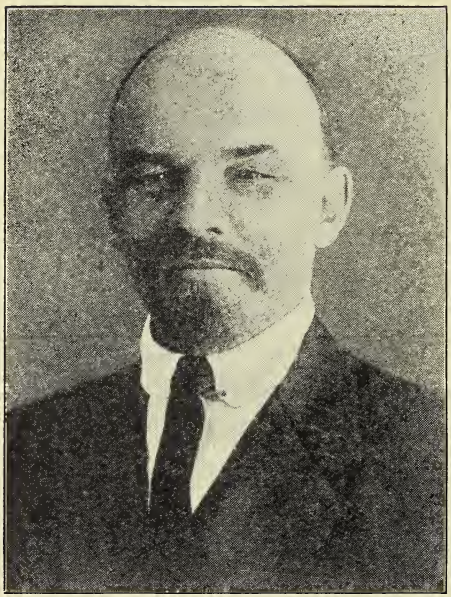
the very unjust tyranny of the Russian overlords, and they preached this "Socialism" with enthusiasm, though many of them were sent into exile as a result. After the Russians were defeated by the Japanese in the war of 1904 many revolutions broke out. Different groups of workers formed councils or "Soviets" to manage their affairs, and one large section of the Socialist party began to preach that the only way of realising their ideals and getting what they wanted was by violence. This section was called the "Bolsheviki," a word which simply means "Majority."

Again many of the leaders were executed or banished, but they did win for the country a Parliament or Duma. This was the first time there had been any form of representative government in Russia, and though very few people were represented, it was a step in the right direction.

* * * * *

When the Great War broke out in 1914, Russia, though she was one of the first countries to strike a blow was totally unprepared. The Tsar was weak and had no good ministers behind him. A tremendous army of fifteen million soldiers was soon put in the field, and for two years the men fought valiantly, but there was no government behind them capable of directing them, or feeding them or providing them with arms.

Soon revolutions began to break out again. The government collapsed. The Tsar and his family were arrested and sent into Siberia, where later they were



PREMIER LENIN OF SOVIET RUSSIA

murdered, and an exiled Bolshevik, named Lenin, returned and became the leader of the Revolutionists.

Lenin set up a kind of government by forming "Soviets" in different districts, but really he kept most of the power in his own hands. His watchword was "Power to the Soviets, Land to the peasants, Bread to the starving, and Peace to all men"—but years of terrible misery and suffering passed before the poor, unhappy country began to settle down, or to see any signs of realising this ideal.

Only a certain section of the people supported the Bolsheviks, so the country was torn by a civil war, and famine followed in its train. So one of Lenin's first acts was to desert the Allies and make a separate peace with Germany. By this peace Russia lost six of her richest provinces, including Finland and Poland which became independent states.

But the vast country still contained 150 million

people, speaking 62 different languages, and when Lenin had restored peace to the country his great problem was to form a government which would unite all these different peoples. He started a system of self-government by appointing Soviets to manage the affairs of every town and district with himself as the head and Dictator of them all. He called the country not Russia but the "Union of Socialist—Soviet Republics"—the "U.S.S.R."

Lenin died in 1924 and the world condemned him as a bloodthirsty tyrant; but many thousands of people in Russia almost worshipped him, looking upon him as a national hero, and the saviour of his country.

Stalin took up Lenin's work. He found a country with hardly a decent road, very few railways, little or no machinery, a hundred million people who could not read, peasants still living in mud huts in unpaved villages and working with wooden ploughs and other ancient tools.

Stalin's government determined to alter all this in five years. The rest of the world laughed at this "Five Year Plan" in 1928, but by 1933 it was rubbing its eyes in astonishment and beginning to fear the power which could accomplish such miracles. For the U.S.S.R. had by dint of tremendous work and self-sacrifice, made more progress in five years than other countries had made in a hundred.

It had introduced modern methods everywhere. Built its own machinery, electrical plants, roads, and railways; in fact it had carried through the greatest

A STREET IN MOSCOW SHOWING MODERN BUILDINGS

revolution in history. It will be interesting to watch how the U.S.S.R. develops during the next few years, and to note whether its influence on the rest of the world is for good or ill.

QUESTIONS

1 What do you know of Peter the Great?

2 Give some account of Russia before the war.

3 What do you know of
   (*a*) Lenin.
   (*b*) The Five Year Plan.
   (*c*) The U.S.S.R.

CHAPTER 26

The Awakening East

Part I

While all these changes have been taking place in the Western World we have heard little or nothing of the countries of the Far East. The Story of India we read in Book II, but what about China and Japan? Have these two great countries contributed nothing to the progress of the modern world?

China, you will remember, had developed a wonderful civilisation of its own away back in the far distant past. When the people of these islands were wild barbarians, painting their bodies and living in caves—long before the Empires of Greece and Rome were born—the Chinese were building magnificent cities, writing beautiful poems, making exquisite china, painting wonderful pictures and spinning fine silk.

They flourished about the same time as the Empires of Egypt and Babylon, but they owed nothing to those two countries for they were separated from them by high mountains and wide-spread desert lands.

Very early in their civilisation the Chinese invented the art of writing: some time later they discovered a method of making paper, then they invented printing, and soon had a fine literature of their own. They invented also gunpowder and a compass. So 3,000

CHINESE WRITING

years before the birth of Christ they were as far advanced along the road of progress as Europe was 1,400 years after Christ, that is, at the time of the Renaissance.

They had had, too, a wonderful teacher named Confucius, who had given them good laws, taught them to be honest and upright, to help each other, and in every way to be "perfect gentlemen."

The Emperors of China were known to their people as the "Sons of Heaven," and they were treated with great reverence as the representatives of God.

* * * * *

Strange as it may seem, it was not until a Venetian merchant, Marco Polo, journeyed there in the 13th century and returned to tell of the marvels of Kublai Khan's court and city, that Europe knew anything about this wonderful land lying at the other side of the world.

Then, as we have seen, the merchant adventurers of the 16th century tried to find a road to "far Cathay."

In 1557 the Portuguese established a trading port at Macao, on the Chinese coast, and in Charles I's reign an English ship reached Canton.

Now we must try to realise that at this time the Chinese were far more cultured than their visitors. They looked on these sailors from the West as barbarians, and they became afraid lest their ancient culture should be destroyed by these newcomers. So they turned them out! They closed their ports, and forbade any strangers to come into their land.

So, just at the time when the Western world was stirring to new life, and making all kinds of new discoveries, China shut herself up with her ancient wisdom, and made no fresh advance. Consequently, though she had had four thousand years start in the march of progress, she found when in 1841 she did at last open her gates to the foreigner, that she had fallen far behind in the race and that *she* was now the backward country.

For at last Europe and America would no longer be denied. China was forced to open her ports to the hated foreigner. There were several small wars in one of which the British General, Gordon, won renown: China was obliged to grant "concessions"—that is districts which should be under European or American control, and the port of Hong Kong was handed over to Britain.

A certain number of the Chinese went abroad and began to study Western ways. When they returned and tried to introduce changes into their country, they

A VIEW OF PART OF SHANGHAI

clashed with a big section of their countrymen who would not give the least consideration to the question of change.

So in 1912, there was a terrible revolution—the Emperor was dethroned and a republic was declared.

But once the prestige and tradition of the Old Empire was lost, no government was able to hold together the various quarrelsome groups who were all striving for the mastery, or even to keep anything like order in the different sections of the vast country. Many parts of the land were overrun by great hordes of half-starved bandits who raided and killed to their hearts' content—while many "war lords" with a few soldiers to back them, set themselves up as rulers in different provinces. So poor, unhappy China was torn to pieces, her former grandeur trampled in the dust.

This state of affairs gave Japan an opportunity to enlarge her empire at the expense of China. In 1933 there was a war between the two countries at the end of which Japan had established her control over several Chinese provinces.

She also gave her support to some of the provinces which were trying to get some sort of order out of the chaos. With Japan's help the old province of Manchu, from which had sprung much of China's greatness, declared itself independent of the rest of the troubled country, and in January, 1934, they set up a monarchy of their own with the old Emperor, who had been deposed in 1912, as their King.

The world is to-day watching with interest to see if this new kingdom of Manchukow, will be able successfully to combine the modern developments of the Western world with its own ancient culture.

Part II

Japan also had an ancient civilisation similar to that of China, and she too had little or nothing to do with Europe until in 1549 a famous missionary, Francis Xavier, visited the islands and converted a number of the Japanese to Christianity.

In 1638 Japan, like China, closed her doors. The Christians were persecuted: no strangers were allowed to enter the country and no Japanese was allowed to travel abroad. This state of things lasted until the 19th century when some energetic merchants of America and Europe, ever seeking fresh markets, insisted on entering the ports of Japan, and in 1853, Commodore Perry, an American, persuaded the Japanese to make a commercial treaty with the Americans.

Then a rather wonderful thing happened. Unlike China, when Japan saw something of Western progress, she realised her own backwardness, and immediately set herself to learn all that the Western peoples could teach her.

Under a wise and far sighted Mikado, Mutsu-Hito, Japan made rapid strides.

He gave up his "absolute" form of government and called a Parliament similar to the English

IN A JAPANESE SILK-SPINNING FACTORY

Parliament, giving most of his people a voice in the government. Japanese youths were sent abroad for a few years, to study in the great cities of Europe : when they returned they were expected to tell their fellow countrymen of all the latest methods and ideas.

Machinery was introduced ; factories were built, and railways opened up the land so that very soon Japan became a great manufacturing country. To-day, so quickly has she developed, that she threatens the markets of the whole world. Her people are content with a very low wage, so she is able to produce and sell many things far cheaper than Western nations can.

At the same time as she was developing her trade, she did not neglect other things. Education was made compulsory, and her army and navy were so well organised and trained that in 1894 and in 1933 she fought successful wars against China and in 1904 one against Russia—both countries being many times larger than herself.

Seldom has any country made such rapid progress in such a short time. In fifty years she advanced from a backward medieval state, to the level of the greatest European Powers.

QUESTIONS

1 Mention the chief events in the history of China.

2 Trace briefly the development of Japan.

CHAPTER 27

The World War

Now the birth of these ideas of nationality and democracy was in many respects a good thing: it is well that people should have a nation which they can love and of which they can be proud: it is good that they should take some share in ruling themselves.

England and France had been nations so long that they had ceased to think much about it, but the idea of nationality was still so new to some of these other nations that, like children with a new toy, they never ceased to play with it. They were, these new nations, in many respects, just like children, and they suffered from growing pains and restlessness, and jealousy. They must stretch themselves, expand, and it did not matter who else suffered in the disturbance they caused by so doing.

Germany was the worst behaved of these young nations.

No sooner had she, led by Prussia, united all her states into one Empire, than she began to have great ideas of her own importance and tremendous plans for her own future.

We have seen that Bismarck preached a doctrine of "Blood and Iron," and this, after Germany's victory in the Franco-German War (1871) became the keynote

of her policy. The country produced some wonderfully great men, in art, in music, in literature, in medicine and in science, but to the government and to the people generally, the Army was the chief concern.

Every youth had to serve in the army, and very soon Germany had the largest, best drilled, best equipped, best disciplined military force in the world, and every German was taught to reverence it. If a civilian met an officer, the civilian was expected not only to salute, but to step off the pavement; if he failed to do so, the officer was quite at liberty to strike him with his whip or his sword, and the civilian dared not complain.

When the second Emperor, William II, came to the throne, the young nation was ready to try its wings, and William was just the man to lead it. He was full of ideas of his own and his country's importance. He was the " All Highest," and he was going to be the ruler of the greatest country on earth !

He was the nephew of Queen Victoria, but he had no love for the English, he was too jealous of their power ; he longed for the day when he should be able to try his strength against theirs. He had got his perfect army, so now he would begin to build up a navy which should equal or excel that of Britain. Soon he would have an Empire greater than that of Britain. He would build a railway from Berlin to Bagdad and to the Persian Gulf, so that he would have control of the routes to India and the East.

England watched these developments uneasily and

felt it necessary to enlarge her own navy. France, who had never forgotten the bitter defeat in 1871, was frankly alarmed at the war-like preparations of her neighbour and was obliged to keep her army at full strength.

* * * * *

Meanwhile Austria was growing, and was trying to develop eastwards at the expense of the small Balkan States. Germany and Austria had both supported Turkey when that country made war against the other Balkan States in 1912, so they were annoyed when Turkey was defeated and Serbia, Roumania and Greece enlarged their territories. Austria was jealous of Serbia; and Germany, through Austria, wished to keep some control in the Balkans because of her Berlin to Bagdad Railway.

So, though the greater part of Europe enjoyed peace for thirty-six years, it was from one cause and another, an uneasy peace—an "armed peace." It was as though the whole Continent was balanced on a keg of gunpowder.

France, afraid of Germany, made a close alliance with Russia: Germany of course allied with Austria: Britain for a time tried to hold aloof, but finally made an alliance with France: Italy bound herself, but loosely, to Austria.

Then in 1914 came the spark which fired the gunpowder and blew up the whole continent.

Two Serbs murdered an Austrian Archduke—the heir to the Austrian throne.


EUROPE-1914
(before the Great War)
Scale of Miles
0 100 200 400 600
ARCTIC OCEAN
ATLANTIC OCEAN
NORTH SEA
BALTIC SEA
MEDITERRANEAN SEA
BLACK SEA
CASPIAN SEA
Iceland
NORWAY
SWEDEN
Finland
Christiania
Stockholm
Petersburg (Petrograd)
Kazan
Moscow
RUSSIA
UNITED KINGDOM OF GREAT BRITAIN & IRELAND
SCOTLAND
Glasgow
Edinburgh
IRELAND
Dublin
Cork
Manchester
ENGLAND
London
DENMARK
Copenhagen
Hamburg
Berlin
GERMANY
Warsaw
Poland
Amst.
Brussels
Paris
FRANCE
Prague
Munich
Vienna
Buda-Pest
AUSTRIA-HUNGARY
Bordeaux
Bern
Switz.
Belgrade
Bosnia
SERVIA
RUMANIA
Bucharest
Sofia
BULGARIA
Odessa
Astrakhan
Constantinople
TURKEY
Marseilles
Corsica
Barcelona
Rome
Naples
Sardinia
ITALY
ALBANIA
GREECE
Athens
Crete
Cyprus (Br)
Lisbon
PORTUGAL
Madrid
SPAIN
Gibraltar
Palermo
Sicily
Malta (Br)
AFRICA
Baku
Chief Railways
0 MERIDIAN OF GREENWICH

Naturally the Austrian Emperor was angry and demanded that Serbia should punish the murderers. This, Serbia agreed to do, but the Austrians were not satisfied; they demanded more and more from the little country and Serbia refused to comply with two of these demands, asking that the Great Powers should be called in to say whether they were right or not.

Encouraged by Germany, Austria refused to wait for this conference and immediately declared war on Serbia. Russia came to the help of Serbia, and France backed up her ally, Russia.

Germany, who was well prepared, at once marched an army towards the French border and, determined to strike the first blow quickly, she demanded a passage through Belgium.

Now in several treaties which had been signed between the powers, including Germany, Belgium had been declared a neutral country. So, to Germany's demand Belgium replied:

"If we accept the proposal submitted to us we would sacrifice the honour of the nation and betray our duty towards Europe."

In spite of this refusal, and in spite of the treaties, Germany marched her armies into Belgium, expecting an uninterrupted passage to the French frontier.

Belgium felt bound to resist for honour's sake, and she put up a determined stand at Liege and elsewhere. The little country knew from the first that she had no chance of preventing the passage of the

great German army, which bore down like a huge steam roller over her growing crops and her little villages.

But though she could not prevent them marching through, she could delay them and for ten days, ten precious days which gave France time to collect her armies, Belgium held up the huge German force, though she herself was laid waste and ruined as a result.

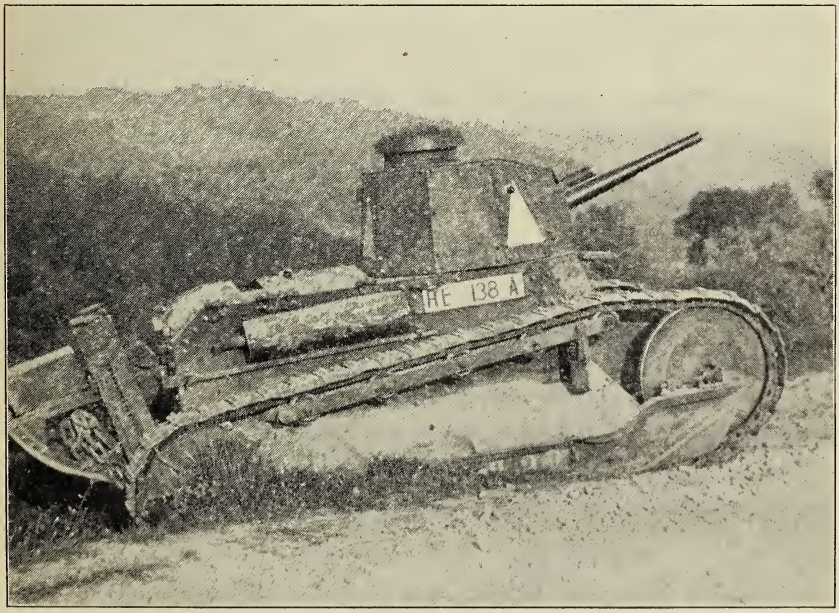
It was this action of Germany, in forcing a way through Belgium, that finally decided Britain to come into the war. At first she had hesitated, but when

SOLDIERS ON THE MARCH

Germany violated the neutrality of Belgium, and when that little country made such a gallant sacrifice (for if she had *allowed* Germany to march through her land she would not have suffered so much) Britain hesitated no longer, but declared herself whole-heartedly on the side of France. Japan joined us a few weeks later, and Italy during the next year, while Turkey joined Germany and Austria, the " Central Powers."

We can say little here about the ghastly and terrible war itself which dragged on for four years and raged practically all over the world.

The British Colonies rallied splendidly to the help



A MILITARY TANK

of the Motherland sending, quite voluntarily, a ceaseless stream of men, and huge supplies of badly needed foodstuffs over the dangerous seas. India, which Germany expected would give us trouble, also came to our help, pouring out men and money generously in Britain's cause.

In 1917 Russia, torn by internal revolutions, collapsed and dropped out of the war, but the United States of America, with their great wealth behind them, joined the Allies, and Germany was gradually pushed back, and was obliged to ask for peace.

On November 11th, 1918, the actual fighting ended, but it was six months before the Peace Treaty was prepared. Even so the hatred and bitterness caused by so much suffering and death was still fresh in men's minds so the terms of the treaty drawn up by the "Big Four," Lloyd-George, Wilson, Clemenceau, and Orlando, were extremely harsh and crippling to the conquered nations.

"Make Germany pay," was their slogan, and of course it was only right that Germany should recompense the Allies and particularly France for the loss and destruction she had caused. But as well as demanding very heavy "Reparations" the Treaty took away from Germany not only her colonies, but the rich coal and iron fields lying in Silesia and in the Saar valley, and also the greater part of her navy. Thus her trade was ruined and she had little chance of making the money which was needed to pay her huge debt.

The Germans were thunderstruck by the harshness

of the treaty, but they were forced to agree to it, and in that same " Hall of Mirrors " at Versailles in which Bismarck had realised his dream of a united Germany in 1871, their representatives were forced to sign this treaty which crushed their Empire in the dust.

The great Austrian Empire, too, was broken up. Hungary became an independent state; the beautiful Tyrol was handed to Italy; the lands previously taken from Poland were restored, and two new Republics, Jugo-Slavia, and Czecho-Slovakia, were carved out of the remainder, so that Austria was reduced to about one fifth of its pre-war size.

The fighting was finished, the treaties were signed, but the terrible results of this, the worst war the world has ever seen lasted for years—indeed many of them are still with us. Revolution and rebellion broke out first in one country then in another; disease stalked through Russia, Austria and China, while every other country was nearly bankrupt, suffering from the terrible waste of men and goods during those four awful years.

Never again can people talk about the " glory " of war. In olden days, when a man marched out with flags flying and bugles blowing and met his enemy face to face, there may have been some thrill and glory in the hand to hand fight to prove who was the stronger man. But in modern warfare, with all the instruments of death which science has given us, there is little of this.

Men stand up only to be mown down in hundreds by long distance guns which they cannot even see, or


ARCTIC OCEAN
ATLANTIC OCEAN
Iceland
ARCTIC CIRCLE
Bergen
Oslo
SWEDEN
Helsingfors
FINLAND
Stockholm
Tallinn
ESTONIA
Leningrad
Ob
Dvina
Sverdlovsk
UNION OF SOCIALIST SOVIET REPUBLICS
Moscow
Orenburg
Ural
Volga
Caspian Sea
Tiflis
Baku
Transcaucasia
NORTH SEA
Gothenburg
Riga
LATVIA
Dvina
Kaunas
LITHUANIA
Copenhagen
DENMARK
BALTIC SEA
Hamburg
Elbe
Prussia
White Russia
Warsaw
POLAND
Berlin
GERMANY
Amsterdam
Cologne
Brussels
Paris
Seine
Loire
Kiev
Dniester
Ukraine
Don
Odessa
Black Sea
Prague
CZECHO-SLOVAKIA
Munich
Vienna
Buda-Pest
HUNGARY
AUSTRIA
Rumania
Bucharest
Danube
Belgrade
YUGOSLAVIA
Sofia
BULGARIA
Istanbul (Constantinople)
TURKEY
Bordeaux
FRANCE
Rhone
Marseilles
Genoa
Corsica
Rome
Naples
Sardinia
ITALY
ADRIATIC SEA
ALBANIA
Salonika
GREECE
Athens
Crete
Cyprus (Br.)
Lisbon
Tagus
PORTUGAL
Madrid
SPAIN
Barcelona
Gibraltar (Br.)
MEDITERRANEAN SEA
Sicily
Malta (Br.)
AFRICA
Glasgow
Edinburgh
Belfast
Dublin
IRISH FREE STATE
Liverpool
ENGLAND
London
Chief Railways
O. MERIDIAN OF GREENWICH
EUROPE
(after the Great War)
Scale of Miles
0 100 200 400 600

to be poisoned and blinded with gas, or to be blown to pieces by bombs, perhaps from the air, which may kill as many women and children as fighting men. In fact, modern war is simply wholesale murder, and everyone hopes that the nations will have learned that lesson from the Great War of 1914-1918, and will try in future to settle their quarrels in a manner befitting a civilised world and not appeal again to barbarous and savage warfare. By so doing they bring shame on our centuries of civilisation, and prove us no better than the ancient barbarians who rushed down from the hills, killing and destroying everything which lay in their path.

QUESTIONS

1 Give some of the causes of the World War, 1914-18.

2 Which countries do we speak of as "The Allies," and which as the "Central Powers?"

3 Name some of the leaders of the Allied armies.

4 Give some of the clauses of the Treaty of Versailles.

5 Mention two or three new countries which appeared on the map of Europe as a result.

CHAPTER 28

The League of Nations

As we have traced our story through the ages, you will have noticed how frequently the march of man's progress from the early stages when he was a wandering

hunter, to our present glorious civilisation has been interrupted by quarrels and wars—wasteful wars which have destroyed life and property and hindered mankind's development many times.

At intervals throughout the world's history a few far-seeing men have realised that this was wrong, and have tried to make the nations of the world more friendly towards each other. George, King of Bohemia in the 15th century, was one of these. He was so distressed to see his beautiful little country laid waste that he sent messengers to the chief rulers in Europe asking that they should meet and talk over their differences instead of trying to settle them by war. But most men scoffed at such ideas. Perhaps the world in those early days was not ready for them; though the nations were busy growing up they had not thrown off all the habits of their uncivilised days, they could still find no other way of settling their quarrels than by flying at each other's throats like the savage beasts of the forests.

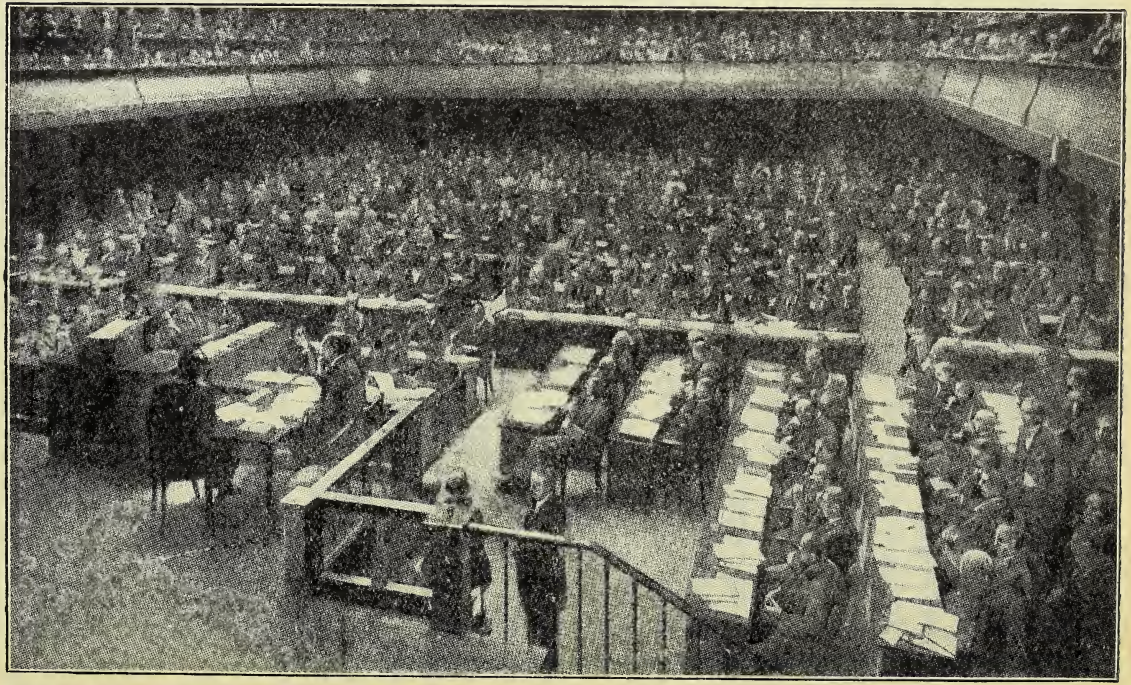
But now after forty centuries of civilisation and nearly twenty centuries of Christianity, more and more people are beginning to feel that it is a disgrace to our manhood to act in this uncivilised fashion—one could expect primitive people to go to war on the least excuse, but not civilised, cultured nations.

So, after the Great World War of 1914-1918, thoughtful, intelligent people got together and declared that the 20th century must not again disgrace itself by such a terrible affair.

They felt, too, that the good gifts of modern science, particularly the aeroplane and the wireless, have so swept away time and distance, have brought us into such close touch with other nations, that we are no longer strangers and foreigners to each other : barriers of mountains, seas and deserts have been overcome, and we are all bound so closely together that " quarrels between nations are now the worst of all quarrels—family quarrels "—and so we must learn to settle them without war and bloodshed.

So President Wilson of the United States suggested that all the civilised nations of the world should form a League in which they could discuss any difficulties and differences which arose between them and settle them peacefully by arbitration. Thousands of thoughtful men and women felt that this was a good plan and readily joined the League of Nations, but unfortunately some nations were not willing to sink their own ambitions and wishes for the common welfare, and so though the League has done, and is still doing, a great work for the world, it is not as powerful as it would be if all the great nations would put aside their own selfish interests, and join together for the good of the whole of humanity.

The League meets in the beautiful " Palace of the Nations " in Geneva. Over fifty countries belong to it, and they send representatives every year to discuss affairs of world wide importance ; among other things they discuss the size of the armies and navies different countries keep up, and they are working steadily for



PALACE OF NATIONS, GENEVA

an all-round reduction in these "armaments," these instruments of war.

When any dispute arises, the League hears both sides of the question, judges between the quarrelling nations and tries to get them to settle their dispute without resorting to arms. It has already settled several such disputes—though unfortunately it has not always been successful: still we must remember that the League is as yet very young and has much to learn.

But the League of Nations has other work to do besides the preventing of war. Its name means, a number of people grouped together to help each other, or for some common cause, and the League is really a Parliament of the Nations which meets to discuss and make laws about those problems which concern not only one country but the whole of humanity. Now that nation is so closely linked to nation, it is useless and dangerous for countries to settle these problems in different ways; they have all to learn to work together for the common good.

The question of health is common to all mankind, and here the League has done most valuable work. It has supplied money, doctors and nurses to help poor and backward countries like Poland and Greece fight their typhoid epidemics and prevent the disease spreading into other countries. It is helping to check malaria in Russia and the terrible Plague which is still far too common in the East, and it encourages research and spreads new knowledge among the medical men of all nations.

Another important duty of the League is to protect the workers of all countries and improve the conditions under which they labour. As we have seen, England and other western nations did a great deal in this direction in the 19th century, but in the East, after the War, things were as bad or worse than they were here a hundred years ago.

In Persia little children of five years old were kept working long hours in the carpet factories. In China children of eight worked from four in the morning till eight at night, packing matches, or stirring the silk cocoons in boiling water, which filled the atmosphere with steam. The League has done much to improve this state of affairs, but much still remains to be done.

It enquires, too, into the conditions under which the coloured races are made to work. Sometimes the natives, particularly in Africa, are treated practically as slaves, forced to remain with their masters and paid little or nothing for their labour. The League is trying to alter this and is also looking after the welfare of sailors left behind when their ships call at some foreign port.

In these and many other ways the League is working tirelessly to improve the lot of mankind, but this work is not done just by the representatives who come once or twice a year, hundreds of men and women of many nationalities are busy in the " Palace of the Nations " all the year round, attending to these matters and to other problems such as those dealing with the postal service and with the railways which run through many

countries. These men and women get to know each other really well and so lose that suspicion and distrust of " Foreigners " which is often the cause of so much trouble.

QUESTIONS

1 Who suggested the formation of a " League of Nations " ? Where does it meet ? Why was this place chosen ?

2 Mention some of the duties of the League.

CHAPTER 29

The Story of Electricity

Part I

As the 19th century was the Age of Steam, so the 20th century may be called the Age of Electricity. But the story of electricity goes on and on : for its start we must look much further back than the beginning of this century, and its end we have not yet reached—in fact we are only in the very early chapters —it may be many years before the full story of electricity and its wonderful powers is revealed to us.

This story, like so many others, begins in ancient Greece. Some of the wise men of that land noticed that if amber and jet were rubbed with silk they would draw feathers, bits of paper or other light things to themselves as a magnet draws a pin.

But the Greeks made little or no use of their discovery, and it was in England in the 16th century

that Dr. Gilbert, a physician at the court of Elizabeth, first used the word "electric" to describe this force possessed by amber and other substances, for the Greek word for amber was "elektron."

During the next century a few men experimented with this new power, but they did not make much progress: they found they were able to *make* a little electricity by rubbing certain things together, but they could not hold it or keep it long enough to study it or to put it to any use.

At last two German professors at the University of Leyden found that though the electric current would pass through anything made of metal, it would not pass through glass, and so in 1745, the year of the second Jacobite Rebellion, the "Leyden Jar" was invented. This was a great help, for now electricity could be gathered and stored, so there was a chance of finding out something of its nature.

But the experimenters had little success until an American, named Benjamin Franklin, had the idea that electricity was similar to lightning.

People scoffed at him as they so often do at a new idea. How could the fierce lightning, with its terrible power, be akin to that tame thing imprisoned in the Leyden Jar! But Franklin was convinced he was right and he made ready to prove his theory when the next thunderstorm came.

He made a kite, and covered it with silk. To the framework he fixed a wire which projected about a foot above the top of the kite. To the kite string he

fastened a piece of ribbon, and where the ribbon and string joined he suspended a doorkey.

Thus prepared, he waited until one day in June, 1752, he saw that a thunderstorm was gathering. Then going outside with his kite and a Leyden Jar, he proceeded to put his theory to the test.

He let the kite rise into the air and the lightning played round it fiercely. Soon Franklin touched the key and was pleased to notice that a spark flew out.

Presently, to his great delight, he found that enough electricity was passing down the string to enable him to charge a Leyden Jar. With this he was able to prove that electricity and lightning are the same.

Soon afterwards Luigi Galvani, a doctor of Northern Italy, was experimenting with a dead frog which he hung on a copper hook from the iron rail of his balcony. Presently he noticed strange twitchings in the frog's legs, and he concluded that there was much electricity stored up in the body of the frog.

But when Volta, another Italian, heard of this he thought that the electricity was caused by the contact of the iron and the copper and that the frog only acted as a conductor. He experimented over and over again with this in mind and finally produced the first *electric battery*.

This was a great help to other experimenters and led to many further discoveries.

One of these was made by a Cornishman, Sir Humphry Davy, who is chiefly remembered because he invented the miners' safety lamp. But he also

invented the first *electric light*, the arc lamp, and the brilliance of this light astonished the world.

This was in 1801, but electric light did not come into general use until Davy's pupil, Faraday, invented the *dynamo* for supplying electric current. The dynamo invented by Faraday was a very small affair, worked by hand, but as usual it was the first step which was important; very soon huge dynamos, driven by steam or water power, were supplying electricity to great cities, and people wondered how they had ever managed without this power, which seems so simple and yet is so mysterious that no one yet really understands what it is.

Faraday, who had worked his way up from a very humble boyhood, went on with his experiments and next invented an electric motor, an invention which is fast revolutionising the world. It works huge machines, it drives cars and trains; it cleans our homes, washes the pots, and irons the clothes—there is no end to the uses to which it may be put—inventors are finding out fresh ones every day.

* * * * *

Meanwhile there was growing up in America a boy who was to make a number of most marvellous and useful inventions for the service of mankind. This was Thomas Edison, whose first job was selling newspapers on the long-distance American trains.

This left him with much time to spare, so the energetic and resourceful boy bought a second-hand printing press, and started to write, edit and print a

little newspaper of his own. He made quite a success of this and he still found time to study and make experiments in chemistry, in a corner of the luggage car.

But this chapter of his life was brought to a sudden close when one day a bottle of some chemical broke and set fire to the floor of the car. Very little damage was done, but the guard who had been so friendly, was alarmed and young Thomas, his printing press and all his apparatus, were bundled out at the next station.

It was this boy who, years later, was fascinated by the great arc lamps which he saw exhibited as a curiosity outside some exhibition.

In imagination he saw them dispelling the gloom of great cities and lighting up every home with their brilliance. But he saw, too, that the arc lamp, in which the electricity was transmitted through two sticks of carbon, was much too big and powerful for ordinary use, so he set to work to invent a smaller lamp.

His trouble was to find a filament small and light, yet sufficiently strong to burn continuously. He tried metal, thread, cardboard, hair, anything he could lay his hands on, and at last he discovered that a thin piece of cane gave the best result. So he sent all over the world for different kinds of cane and experimented with them all until he found the best for his purpose. This he carbonised and so invented the " hairpin in a bottle " lamps.

When he first showed these outside his laboratory, in 1880, such thousands of visitors went out to see the novelty that special trains had to be run. But the

lamps were such a success that very soon they were in common use and had revolutionised illumination the world over.

Edison's lamp remained in use with very little alteration until 1906 when a rare metal "tungsten" was used for the filament, instead of his carbonised cane.

QUESTIONS

1 What do you know of the work of
   (*a*) Franklin.
   (*b*) Galvani.
   (*c*) Volta.

CHAPTER 30

The Story of Electricity

Part II

In the meantime other people were experimenting with electricity in different ways.

As early as 1814 an Austrian named Oersted found that a current of electricity would move a wire in a way which he saw might be useful for sending signals, but it was not until Samuel Morse took up this idea that it was worked out to a practical end.

Morse was a young American who determined to become an artist. He had great talent and he worked hard and by the time he was forty he had become

quite successful and might have looked forward to a life of wealth and honour in his chosen profession.

But just at that time he became interested in the idea of sending messages by electricity. The more he thought about it the more he saw what a wonderful thing it would be, so he gave up his painting and his pleasant life, and retired to a little house where he could work out his plans undisturbed.

For five years he worked and experimented, and by that time he had perfected a system of sending messages by the tapping of a wire. He used up all his own money proving that this could be done on a small scale, but to do it for long distances he needed the permission and help of a government.

But nobody believed in what they called his wild scheme. England, France, Russia, all refused to give him any help, but at last he managed to persuade the United States to grant enough money to put up a wire from Washington to Baltimore.

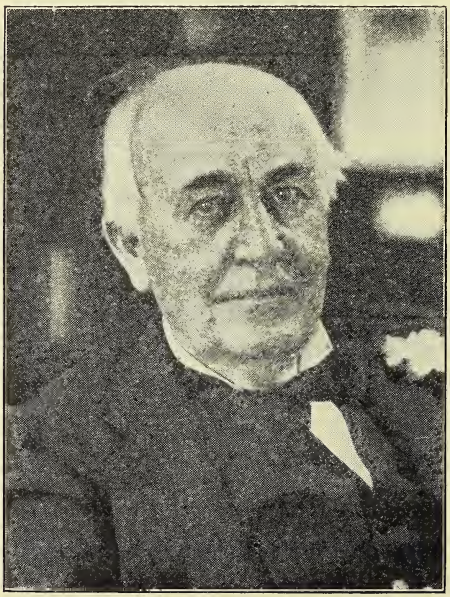
In May, 1844, the first "*telegraph*" message was flashed over this wire by a friend and it was the words "What hath God wrought?" For Morse and his friend both realised what a marvel this telegraphy really was—messages flashing through space with lighting speed to be received hundreds of miles away in a few seconds. Truly it was a miracle that God had wrought!

The scoffers were obliged to own that they had been wrong, and very soon electric telegraph wires were encircling the world—over land and under water.

The code of signals now used is practically the same as that invented by Morse in 1844 and is called after him, the "Morse Code."

* * * * *

One of young Edison's chief interests was this new telegraph which had been invented just about three years before he was born. Thomas was only about fourteen when he rigged up some telegraph wires of his own, insulating them by means of empty bottles. he soon learnt all that the local telegraph operator could teach him and before he was sixteen he was made night operator at a small station near his home.



THOMAS EDISON

He kept on experimenting until he found out how and why the instrument worked, and very soon he had made his first invention, a repeater which passed the message on to a second line where it was ticked off at a slower rate.

Soon after this he got a good position in town, and by the time

he was 21, he had made an invention useful in stock-brokers' offices, for which he received £8,000. With this money he started a factory and laboratory for making electrical apparatus of different kinds, and here he had as many as fifty inventions being perfected at the same time.

He made improvements on the telegraph system, inventing a method by which two messages, going in opposite directions, could be sent over the same wire at the same time.

This was thought so wonderful that he was nicknamed "the Wizard," but soon he improved again on this and made it possible to send *four* messages, two going in each direction at the same time over the same wire.

Edison was the inventor of the "phonograph," from which our modern gramophones have developed: the idea came to him quite suddenly and he made this first talking machine in two days, but he had many experiments to make before he found a suitable material for the making of the records.

* * * * *

About 1870 Dr. Graham Bell, a Scotsman living in America, was trying to find a means of teaching deaf children to speak. He experimented with the sound waves caused in the air by the human voice, and as he got to understand these he had the idea that they might be carried by electricity so that the voice would be heard at a great distance.

He worked out this idea and in 1876 produced the

first *telephone*, which is perhaps more wonderful than the telegraph, for with the aid of the telephone we hear, not just signals which someone must interpret for us, but the actual voice of the speaker though he may be hundreds, even thousands, of miles away.

The telephone is one of the 19th century marvels which has caused changes in life and business amounting almost to a revolution.

Instead of having to take long journeys to get in touch with each other, men can now make their business arrangements without ever leaving their offices. With the improvements which have been made during the last few years, a man in London can speak directly to another in Switzerland, in America, even in Australia, either for business purposes or to get in touch with absent friends.

Help in a sudden difficulty—the policeman, the fireman or the doctor—may be rapidly summoned and many a life be saved as a consequence ; in fact in hundreds of ways this little instrument that sends the human voice so clearly through the air has been a tremendous boon to mankind.

* * * * *

If the telephone is a marvel, how much more so is that modern miracle, " wireless telegraphy ? "

Several men had been experimenting with the idea of sending wireless messages through the air, but it was Signor Marconi, an Italian-Irish engineer who was the first to have any real success. He was only about twenty-one when he first succeeded in sending

signals through space for a short distance. He kept on experimenting until he increased the distance, and in 1897 he came to England where he received much encouragement.

In 1901 he tapped his first wireless telegram across the Atlantic Ocean, from Cornwall to Nova Scotia, a distance of about 2,000 miles.

THE MARCHESE AND MARCHESA SENATOR GUGLIELMO MARCONI

For the sending of messages the wireless telegraph uses the Morse Code and this is particularly valuable to connect places which it is impossible to connect by means of the ordinary telegraph wires. Ships at sea, for instance, are seldom nowadays out of touch with land. Their wireless operator sends out and receives messages from distant ports every day, and if the ship is in danger, he sends out urgent messages in the hope that other ships not far distant will pick them up and come to his aid.

But though this is extremely useful it is the "wireless telephone" which has become so popular

by making " Broadcasting " possible. Here it is not a matter of signals sent by tapping, but the close, familiar sound of the human voice which makes this " wireless " such a wonderful influence, carrying as it does, the messages of civilisation into the most lonely corners of the earth.

Think for a moment of the tremendous wonder of if all. You speak into a little instrument in London : the air waves created by your voice are strengthened by electricity so that your words are heard *instantly* in Paris, in Rome, in Sydney, in the midst of the African desert, in the frozen regions of the Poles, and without even the help of a wire.

Brick and stone cannot keep out the sound. You shut your doors and windows, turn a little knob, and there floats into your closed room the song of some wonderful singer away in Berlin or Rome—the speech of Prince or Minister in some distant hall—not a reproduction as in the case of a gramophone record, though that is wonderful enough—but the actual song and the actual speech : we hear them as plainly and at practically the same moment as the people sitting in those far distant halls, for it is calculated that the sound which leaves the transmitting station travels at the almost incredible speed of 186,000 miles a second !

Perhaps even more wonderful than this is the " Television" which J. L. Baird is still perfecting. We can now not only hear the voice of a friend hundreds of miles away, but also by the aid of this apparatus actually see him.

Since 1930 plays have been broadcast in such a way that we can see as well as hear the people acting in them though many miles may be between us and the actors! In October, 1934, photographs were transmitted from Australia by beam wireless, covering the distance of over 11,000 miles between Melbourne and London in 25 minutes. Can any greater marvel than this be imagined? It sounds almost as wild as a story out of the Arabian Nights, yet in a few years it will become a commonplace of our everyday lives. Truly this is an age of miracles! By the aid of electricity time and space have been vanquished and nation linked up with nation in a common bond and interest.

QUESTIONS

1 From this and the last chapter, and any other books you can find, write short biographies of

(*a*) Edison.

(*b*) Davy.

(*c*) Faraday.

(*d*) Morse.

2 What inventions are associated with the names of

(*a*) Dr. Bell.

(*b*) Marconi.

(*c*) J. L. Baird.

3 Mention some of the ways in which "Wireless" has benefited mankind.

CHAPTER 31

The Story of Flying

Part I

The Story of Flying is another story of which we to-day cannot read the end, and though it is really a very modern story it has had various prologues and false starts throughout the ages.

These go back to the fabled days of King Minos of Crete, who imprisoned Icarius and Daedalus in the Labyrinth which the latter had built for the Minotaur. Unable to find their way out of the Maze, this father and son had the idea of flying out. They made for themselves wings of feathers and fastened them together with wax. With these they soared triumphantly out of the labyrinth and across the sea. Daedalus reached the Island of Sicily in safety, but Icarus flew too near the sun and the heat melted the wax in his wings: he fell into the sea and was never heard of again.

Though this is only a story, several such fantastic attempts were really made in early days, for a few men have always been fascinated by the idea of flying.

Roger Bacon in the 13th century prophesied that the day would come when men would fly through the air like birds, and that great and many-sided genius Leonardo da Vinci, who was before his age in many ways, made plans and drew designs for aeroplanes in the 15th century.

But it was not until the middle of the 18th century, that period which was so full of wonderful inventions, that really scientific attempts were made to fly.

One of the first successful attempts was made in France in the year 1783. Two brothers, named Montgolfier, prepared a huge linen bag on a frame. This they took out into a field where a heap of straw was in readiness. The straw was set alight and the mouth of the bag arranged near it. As the bag filled with hot air and smoke it began to swell and then to rise. The ropes which had held it to the ground were cut, the bag rose higher and higher into the air, then it sailed away before the wind. For ten minutes it kept afloat, then it dropped to earth a mile and a half from its starting point.

The first balloon in history had made a successful flight!

Shortly afterwards the Montgolfier brothers sent up their first passengers. They made an eight minutes flight and came to earth two miles away. These first aeronauts were a sheep, a duck and a hen!

Soon afterwards another Frenchman, de Rozier, determined to trust himself to this new and wonderful invention. He went up in a balloon and had the thrilling experience of being the first man to sail in the air. For twenty-five minutes he floated above the earth and came down safely five miles from his starting point! Unfortunately two years later this daring pioneer lost his life trying to cross the Channel in a balloon.

These first balloons were raised by means of hot air, which as you know, is lighter than cold air: the linen bag full of hot air floated on the colder air beneath, just as a cork floats on water. But as soon as the air in the bag began to cool the balloon began to sink, so the problem was how to keep the air in the bag hot.

One idea that was tried was to fix a little furnace below the mouth of the bag: this kept the air hot, but it meant carrying a load of fuel which was too heavy, and so this plan did not work well.

Now just at this time many men were experimenting with the gases of which the atmosphere is composed. They discovered that hydrogen is fourteen times lighter than air, so instead of filling the balloons with hot air they filled them with hydrogen and so found they could keep them afloat for any length of time.

This was a great help and ascents became more and more common, the chief problem now being how to steer these things so that they should not be at the mercy of every wind.

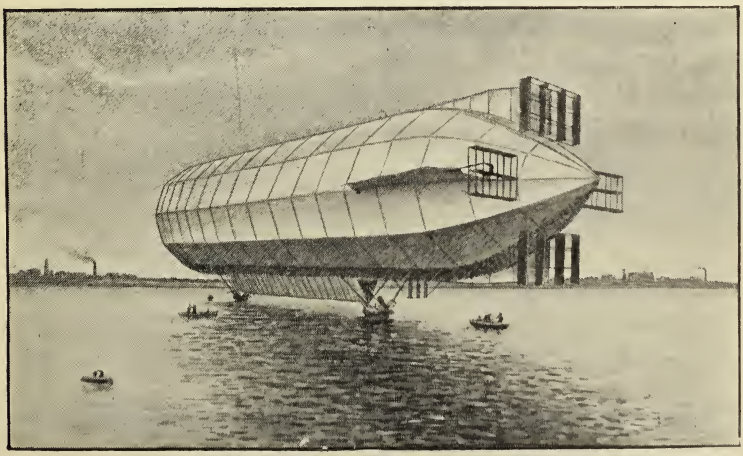
As the nineteenth century progressed engines of different types were perfected for land and sea use; so the next balloons were made cigar-shaped, and fitted with engines and propellers. In 1901 Santos Dumont, steered one of these cigar-shaped balloons round the Eiffel Tower in Paris at a speed of nineteen miles an hour—a tremendous achievement which made the world realise that these "airships" had a great future before them.

Count Zeppelin, a German, saw their possibilities

and spent the remainder of his life improving this type of aircraft.

Finding that the cigar-shaped gas bags were inclined to " buckle " in the middle, he made a framework of aluminium divided into three or four compartments : each of these was fitted with a separate gas bag, and the whole framework was then covered with varnished silk. He thus made the first rigid airship. He made several other improvements which gave greater speed and more accurate steering.

When the World War broke out in 1914 Germany had a number of these great Zeppelins, which she intended to use for dropping bombs in enemy countries. They were not as successful as she had hoped but still she managed to do a considerable amount of harm with them, killing not only soldiers, but unprotected



AIRSHIP

civilians, including many women and children, and doing much damage to unfortified towns.

* * * * *

Hydrogen, the gas with which the bags were filled, was highly inflammable, and fires frequently destroyed the Zeppelins. It was a great help when, about 1916, someone discovered that "Helium," a non-inflammable gas which had been very scarce, could be manufactured in large quantities. From that date helium was used instead of hydrogen and the danger of fire was considerably lessened.

In 1919 a British "dirigible" (steerable airship) similar to the Zeppelin, crossed the Atlantic in 108 hours: it did the return journey from New York to England in three days, three hours, thus beating the fastest steamship by nearly two days.

Since that date other wonderful flights have been made by these great airships, but there have also been several very serious accidents resulting in heavy loss of life. Many improvements will have to be made before these monster ships can be navigated with perfect safety through the air.

QUESTIONS

1 Mention some of the early inventors of balloons and airships. What were their difficulties?

2 What discoveries and inventions of the next few years helped to overcome these difficulties?

CHAPTER 32

The Story of Flying

Part II

While one group of men was perfecting these lighter-than-air machines, others were experimenting on different lines.

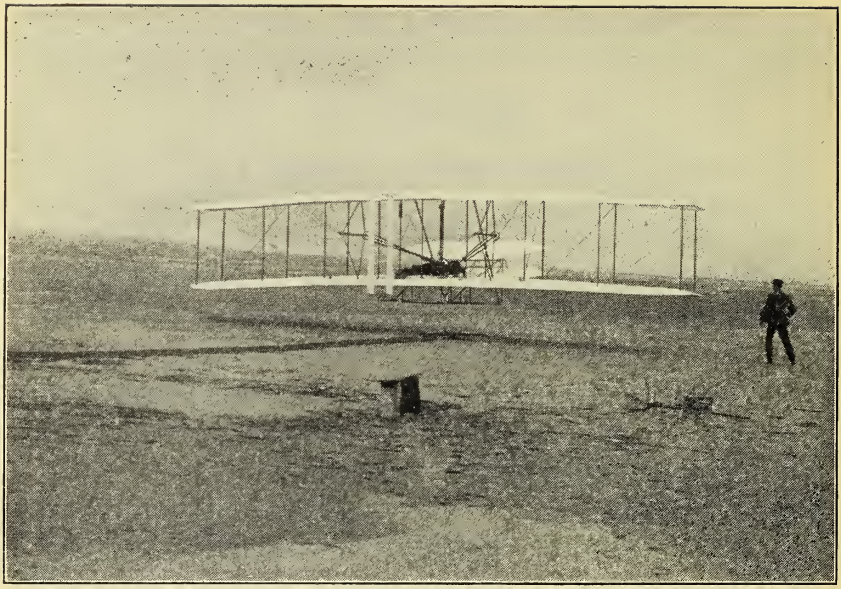
"Large birds, like eagles, are heavier than air, yet they can fly: so man should be able to fly if he were fitted with the proper wings," argued these experimenters.

For a long time this idea was ridiculed, but the two Wright brothers were secretly working out their plans in America. They experimented with huge box kites and then with a "glider" which would carry a man a short distance and settle to earth gradually.

Professor Langley tried to improve on this by adding a small engine and though he was not very successful the Wrights developed his idea and in 1903 produced a machine driven by a petrol motor, which stayed in the air for an hour.

What a thrill was theirs! They had achieved the impossible and flown in the air like a bird!

When once the first steps were mastered, improvements quickly followed. There was great excitement when in 1908 the first aeroplane was flown across the English Channel by Bleriot, a Frenchman.



WRIGHTS FIRST FLIGHT

Seaplanes, monoplanes, biplanes, followed each other rapidly and during the war the engines were improved until they were very light yet capable of great speed.

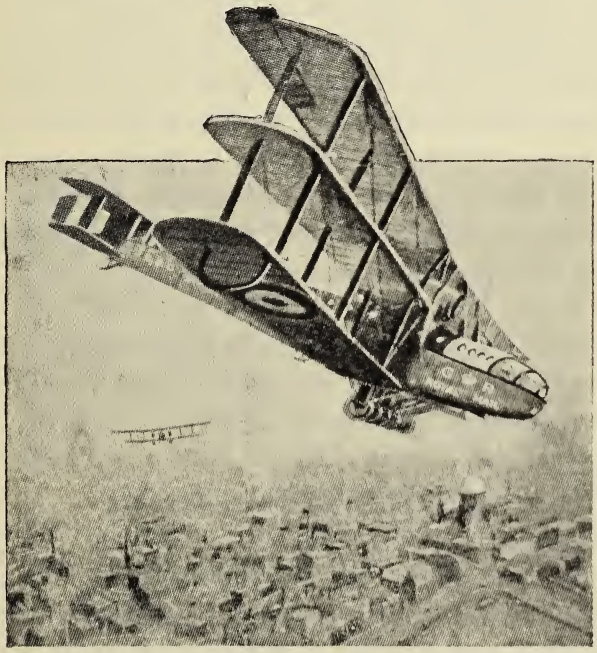
Soon after the war larger aeroplanes, with comfortable cabins were constructed and regular services were started between London and Paris.

Then the difficulties and dangers of crossing a large stretch of water like the Atlantic were faced. In 1919 three seaplanes set off from New York: only one of them, the N.C.4 managed to complete the journey, having crossed from Newfoundland to the

Azores in fifteen hours! After a short stay it went on to Lisbon, having taken only twenty-six hours, forty minutes to cross the Atlantic.

And this record was easily broken a month later, when Captain Alcock and Lieutenant Brown flew the 1,960 miles between Newfoundland and Ireland in sixteen hours, twelve minutes!

Think of it! The journey which took Cabot weeks and weeks to accomplish—which took the first steam vessels of a hundred years ago fourteen days—which takes the floating palaces of to-day four and a half



AEROPLANE

days—can now be made in less than one day by these ships of the air!

Since then many wonderful and record-breaking flights have been made by different people. In 1926, Sir Alan Cobham flew from Cairo to Cape Town in nine days, and in the same year he made a record flight to Australia. These were splendid flights, but they have been beaten many times in the last few years.

In 1930 Amy Johnson completed the long journey to Australia, quite alone in a small "Moth" machine, taking about twenty days for the journey. In 1932 she flew to Cape Town in 4 days 6 hours. In 1933 Kingsford Smith reached Australia in 7 days $4\frac{3}{4}$ hours, and Charles Ulm, in 6 days 18 hours. In the same year Wiley Post flew all alone, round the world, a distance of 14,560 miles, in 7 days 18 hours. In May, 1934, a young girl, Jean Batten, braved whirlwinds, monsoons and shark-infested seas and flew alone from England to Australia in less than fifteen days.

* * * * *

But even more important than these record-breaking flights are the Air Services which travel practically as regularly as train and boat services. Nearly all the big countries have their own services, generally connecting up outlying parts of their Empire.

The British Imperial Airways now send out planes at regular intervals to India and the East.

Shorter services are constantly being added. There is a regular service from London to Paris. An eight seater 'plane now flies daily from London to Jersey,

taking less than two hours, whereas the ordinary journey by boat and train takes twelve.

The little Dutch nation has developed a wonderful weekly service between Holland and the Dutch East Indies.

In December, 1933, a special effort was made to take the mail from Holland to her colonies in five days. The "Pelican," an ordinary Fokker machine with an average speed of about 120 miles an hour left Amsterdam on the frosty night of December 18th and reached Batavia in blazing sunshine four days later. Over Athens, Bagdad, Karachi, Calcutta, Rangoon, it flew with its 80,000 Christmas letters from the folk at home, and broke the world record by covering the 9,000 miles in four days, four hours and forty minutes.

* * * * *

In October, 1934, there was a great air race from England to Australia; men and women of different nationalities, and flying different types of machines, took part in it. Perfect as their owners thought their machines before they started, some of them could not stand up to the enormous strain of rushing through the air at two hundred miles an hour and more, and they developed faults which were previously quite unsuspected. These men and women knew that they were taking their lives in their hands, for as they rushed at such enormous speeds over desert and jungle, mountain and storm-tossed sea, any defect in their machines might cause a fatal crash. There were several such breakdowns, and one or two of them were fatal.

Mr. and Mrs. Mollison (Amy Johnson) made the best progress at the beginning of the race. They reached Karachi in record time, but then they developed engine trouble and were held up at Allahabad.

Close behind them came C. W. A. Scott and Campbell Black, in a "Comet" machine—a big, red racing monoplane. They reached Singapore, 7,063 miles from Mildenhall, in Suffolk, in the marvellously short time of forty hours, having kept up in spite of bad weather, an average speed of 180 miles an hour.

They determined to do the flight from Singapore to Darwin, in Northern Australia in one "hop." Halfway across the Timor Sea one engine gave out, and for two and a half hours they flew on the sole remaining engine. "That," said Scott, when they arrived in Darwin, "was a nightmare—but it saved petrol. We will go on till we drop. We are determined to win." So repairs were made very hurriedly, and again the "Comet" rose and disappeared into the night. In the early morning it flashed over the finishing line near Melbourne, and two dead-tired but triumphant men climbed out to be welcomed by a thrilled and excited crowd. Scott and Black had won the record for England; they had reached Australia in 2 days 22 hours 58 minutes.

Next came the "Flying Dutchmen," Parmentier and Moll, flying a large plane carrying three passengers and 30,000 letters. They flew into a terrific storm and ran short of petrol, and so were forced down less than 200 miles from Melbourne. They made a wonderful

night landing in a very small space, aided by the lamps of hundreds of motor cars, but they were badly bogged in a sea of mud, and only after a tremendous struggle, lasting nearly nine hours, were they able to release their 'plane, and set off on the last lap, reaching their journey's end in 3 days 18 hours 17 minutes.

Third in the race was an American machine which arrived in 3 days 21 hours, and fourth came another British 'plane. This was flown by Jones and Waller, who created another wonderful record by starting back almost immediately and completing the return journey in 13½ days.

Try to imagine what this means. Australia reached in less than three days, whereas a hundred and fifty years ago the voyage from England to Sydney took Captain Phillips and the first settlers over thirty-six weary weeks. Such a comparison makes one realise how aircraft is mastering time and space and bringing the most distant corners of the earth into close touch with each other.

What is the use of these wonderful flights, apart from the testing of the splendid machines, and the exhibition of the skill, pluck and endurance of the airmen? Their chief value lies in the fact that they are making the two countries, though they be 12,000 miles apart, into near neighbours. Only a hundred years ago Melbourne, now a fine city, was a mere collection of huts on the Yarra River. Fifty years ago Australia was considered a far-away almost inaccessible land; people who went there from England seldom returned. It took the sailing ships at least twelve weeks

to do the journey, and even to-day, the fast steamers take about thirty-five days. Yet Scott and Black have covered the distance in less than three days.

So very soon regular air services will be arranged between England and Australia. The two countries, and indeed all countries will be drawn closer and closer together. Ignorance of each other and the misunderstandings and quarrels which arise from such ignorance will be swept away; the countries will learn to put aside their jealousies and to work together for the common good.

QUESTIONS

1 What is the chief difference between airships and aeroplanes?

2 Who were the inventors of the first aeroplanes?

3 Mention two or three famous flights of recent years. (Any day still more flights may be mentioned in the newspapers. It would be interesting to keep a record of these).

4 In what ways have airships and aeroplanes proved a blessing to mankind?

5 In what ways may they prove a curse?

CHAPTER 33

The Conquest of Pain

Part I

These inventions and discoveries of the last hundred and fifty years have helped to make life fuller and pleasanter for many people, but that which has done the most for the happiness of the whole world is the

work of the scientists and doctors who have waged a ceaseless war against disease and pain.

For a long time men knew little or nothing about the construction of the human body and how its various organs worked. The monks and others discovered that certain herbs would give relief from pain, and would sometimes cure a person who was very ill and so they made a study of these herbs and doctored their patients with them.

But it was not until the reign of Charles I that people understood anything about the circulation of the blood. They thought that it flowed through the body in a haphazard way, until in 1628, William Harvey, an English doctor, proved that it flowed to and from the heart in a perfectly ordered manner.

This was a great help to other men who were experimenting, but many years passed before they began to find out how different diseases were *caused*.

Robert Knox, a German scientist, was one of the first to prove that many illnesses were caused by little germs or bacteria which get into the body and upset the regular work of the blood and of the different organs.

These germs are so very, very small that thousands of them can be collected on the head of a pin—they are all around us, in the water, in the air, in the soil, on practically everything we touch. Some of them are very useful—without them we could not make butter or cheese, wine or vinegar: but others cause disease and death to animals and men.

Robert Knox had the idea that each separate disease was caused by a different germ. He experimented first with anthrax, a disease which was killing off thousands of sheep and cattle every year. He found that in every dead sheep he examined, the same germ was present, so he cultivated a number of these germs and injected them into some healthy sheep. All these sheep died of anthrax, so proving that the disease was caused by that particular germ.

Knox and others then examined under the microscope the blood of people suffering from different diseases, and in time they discovered the germs causing cholera and tuberculosis, blood poisoning, whooping cough and several other ills.

This discovery of the *cause* of the disease was an important step, the next step was to try to prevent or cure it. The germs cause sickness by setting up a poison or " toxin " in the blood. A French chemist, Louis Pasteur now declared that he could prevent anthrax by injecting into the animals an " anti-toxin," that is, a weakened form of the anthrax germs.

Years before, an English doctor, Edward Jenner, heard a country girl in Gloucestershire say, " I cannot take smallpox for I have had cowpox." Jenner enquired into this and found that people who had had cowpox through milking diseased cows, seldom took the more serious disease of smallpox.

Jenner experimented and found that if he injected a healthy person with the fluid from a cowpox sore, that person developed a similar sore, but would not

take smallpox. He proved this many times and gradually "vaccination" (the word comes from "vacca," a cow) practically conquered the once common and dreaded disease, smallpox.

It was just chance that led Jenner to this discovery; he and his fellow-doctors knew nothing about germs, and so when Pasteur, nearly a hundred years later, proposed to use much the same method to conquer other diseases, he was met by the usual scoffing. But in face of much discouragement he proved that he was right—just as a weakened form of pox germs would keep away smallpox, so a weakened form of anthrax germs would keep away anthrax.

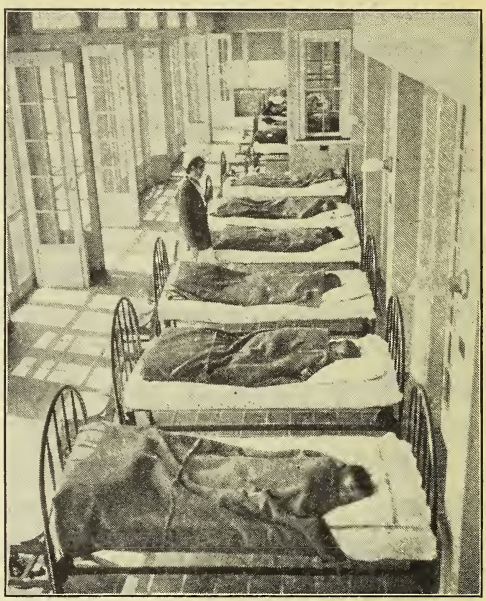
He then went on to prove that the same idea could be used to prevent and cure other diseases. He was particularly successful in his experiments on rabies or hydrophobia, a terrible disease caused by the bite of a mad dog or other animal, which no one had been able to cure. In 1885 Pasteur, though he was not a doctor, saved the life of a child and of a young shepherd by his method. Then doctors began to follow his advice and over three hundred people were cured of this terrible disease in a few months.

Pasteur died in 1895, having done a great work for humanity: as well as the wonderful results which we have just noted, his fine work laid the foundation on which other doctors were able to build still further for the health and well-being of the whole human race.

* * * * *

It was discovered that the terrible disease called, in

the Middle Ages, the Plague, which used to kill thousands of people at a time, was caused by a germ which was carried from diseased rats, by a flea. This is another disease which has been almost entirely stamped out in western nations.



GRASSLANDS HOSPITAL IN VALHALLA

Malaria, a disease which causes the death of thousands of people every year, has been traced to a germ carried by a certain type of mosquito. It is only quite recently that this has been discovered owing to the self-sacrificing and heroic work of Sir Ronald Ross. In the same way Dr. Walter Reed traced the germ which caused yellow fever to another mosquito—and by draining the swamps where these mosquitos breed, or covering the stagnant pools with kerosene, a good deal has been done to check the ravages of these two dread diseases.

Other men have discovered the germs which cause diphtheria, cholera, typhoid fever and many other

dreadful diseases, and have in many cases been able to check them by "inoculation" or the injecting of a milder form of the disease, as Pasteur did.

But many diseases have not yet been traced to their origin, and here is a great work for the present and the future, a worth while fight, to rid mankind of some of its deadliest foes.

QUESTIONS

Describe the work of

1 Robert Knox.
2 Louis Pasteur.
3 Edward Jenner.
4 Sir Ronald Ross.
5 Dr. Reed.

CHAPTER 34
The Conquest of Pain

Part II

There are other types of diseases which cannot be prevented or cured in this way. Sometimes a limb is so badly injured either by disease or accident that it cannot be healed and has to be cut off. If this is necessary a man is put to sleep and he does not know anything until the operation is over.

But a hundred years ago it was not possible thus to put a man to sleep—the patient on the operating table felt all the terrible pain caused by the surgeon's knife as the limb was cut away.

Then, in 1800, a young Cornish lad, Humphry Davy, experimenting with gases in his laboratory, inhaled a gas which immediately put him to sleep; he had a pleasant dream and awoke laughing, so he called this gas "laughing gas" and thought what a relief it would be to people undergoing painful operations.

But nearly fifty years went by and very little use was made of his discovery.

In 1847 James Simpson and two friends experimented with other gases which would make a man unconscious, and they discovered "chloroform." Presently doctors all over the country were using this or some other "anaesthetic," so the patient felt no pain or shock and it was possible for the doctor to spend more time and care on the operation than was possible when the patient felt the terrible agony of the knife.

So operations became more frequent, but still thoughtful doctors were worried, for often after an operation the wound would not heal. Blood poisoning, or septic poisoning set up and the flesh actually rotted away. The patients suffered terribly and often died in dreadful agony.

Then Joseph Lister, a young surgeon in a Glasgow hospital, determined to find some cure for this terrible state of things.

With the help of the microscope he examined the

diseased flesh round a wound. Here the discoveries of Pasteur were a great help to him, for as the great French scientist had said, "germs cannot come into the world without parents like themselves." Lister proved that it was not the air which caused the trouble but the germs present in the air, which set up the decay.

Years before it had been proved that germs could not live in carbolic acid; Lister now set himself the task of finding a solution of carbolic acid which would kill the germs but not irritate the wound. After much experimenting he succeeded not only in cleaning the wound, but also in producing a dressing which would keep it free from germs: once this was done the wound began to heal splendidly.

For a long time other doctors sneered at his discovery, but after a while they were convinced of its value, and began to follow his example. So the horrible decay and gangrene became a thing of the past.

Lister received much honour for his work in the cause of suffering humanity. He was given a title and when he died, in 1912, he was buried among the nation's great ones in Westminster Abbey, for he had "saved more lives than all the wars of the ages had thrown away."

* * * * *

In the meantime there was growing up in the little country of Poland a girl who was to carry still further this fine work of relieving pain and suffering.

At an age when most children are still dreaming of

fairyland, little Marie was taking a peep into a world as full of mystery and magic as any fairyland, for she was helping her father in his laboratory and getting, through his microscope, many a glimpse of the wonderful world of tiny things which lies all around us but of which we so seldom think.

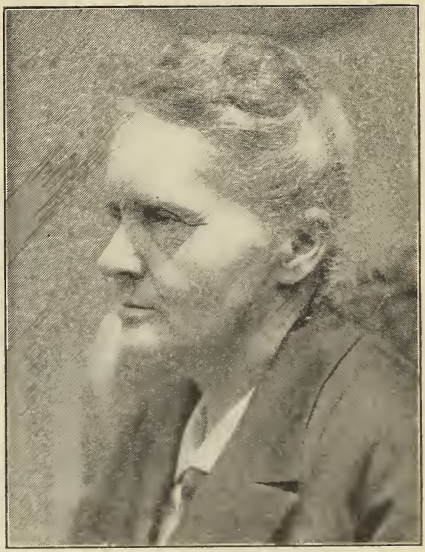
Marie was known as "Miss Professor" and was getting on well with her studies when suddenly she had to fly from her home.

You will remember that Poland had been divided up between Russia and Germany and Austria. Of course most of the Poles, who were very patriotic, did not like this, and every now and again there were plots and risings to try and drive the foreigners out.

Marie was concerned in one of these plots: it was discovered and the plotters had to flee for their lives, so Marie, disguised as an old woman, fled to France: she arrived in Paris quite alone and with very little money. She took a little back room and after a time got the work of washing bottles in the science laboratory of the Sorbonne, or University.

This was a very lowly job, but she did it well and soon showed that she was worth something better. The head of the department noticed her keenness and when he found she had some knowledge of science he gave her the chance of continuing her studies under M. Curie.

Presently master and pupil fell in love with each other. "What a grand thing it would be to unite our lives for the good of science and humanity," said



MME. MARIE CURIE

M. Curie, and so the two married and continued to work together —each doing their share of the housework so that they could hurry back to their beloved laboratory.

About this time, 1895, Professor Röntgen discovered that there were certain rays invisible to the naked eye, yet so powerful that they could penetrate substances which ordinary light could not penetrate. With the help of these rays doctors could now take photographs of the bones or internal organs of their patients, and so diagnose what was wrong far more accurately than they had been able to do before. These rays are very mysterious even to clever scientists and doctors and so they are called X-rays, or sometimes Röntgen Rays, after their discoverer.

It was then found that an ore called "Uranium" gave forth these rays and after their marriage Professor and Madam Curie began experimenting in this direction. After four years of struggle they managed to extract from uranium a much more powerful substance which they called "Radium." The rays

AN X-RAY PHOTOGRAPH

given out by this new substance were two million times more penetrating than those given out by uranium.

This was an extremely important discovery with tremendous possibilities for the treatment of disease, but radium is extremely dangerous to handle, as the least touch near the skin causes terrible burns. Professor Curie and doctors who have since used it have had their hands very badly crippled, but they have never ceased in their heroic endeavours to perfect this discovery which is proving more and more a great boon in the war against pain and disease.

QUESTIONS

Describe the work of

1 Robert Lister.
2 Mme. Curie.

* * * * *

So our story, as far as we can read it, draws to a close. You and other boys and girls like you, will very soon be making history and preparing the next chapter for the Story of Britain and the Modern World. What will happen in this wonderful old world of ours during the next half-century lies in your hands. A knowledge of the history of the past will help you to avoid the faults of earlier ages and to build magnificently on the splendid foundations laid not only by our own ancestors of whom we have every right to be proud, but by their fellow-workers in other lands.

Their labours have not been in vain if they have helped to sweep away the clouds of prejudice and bitterness, ignorance and hatred which have for so long darkened our world: if they have helped to hasten the coming of the day when

> "The war drum throbs no longer and the battle flags are furled
> In the Parliament of Man, the federation of the World."

		British Affairs	
	1688	The Bloodless Revolution. William and Mary come to the throne.	
	1689	Toleration Act.	
	1690	Battle of the Boyne.	1699
	1692	Massacre of Glencoe.	
1700		Agricultural Revolution.	
	1700	Jethro Tull's drill invented.	
	1702	Anne becomes Queen.	
	1707	Union of Scottish and English Parliaments.	
	1714	George I becomes King.	1707
	1715	First Jacobite Rebellion.	
	1727	George II becomes King.	
	1738	Kay's Flying Shuttle invented.	
	1745	Second Jacobite Rebellion.	
			1751
			1757
			1759

CHART

Empire Affairs (*See Book II*)		Foreign Affairs	Great Men
	1683	Vienna rescued from the Turks.	John Sobieski.
Dampier explores N.E. coast of Australia.		Western Culture introduced into Russia.	Peter the Great.
Nova Scotia acquired from the French.		War of Spanish Succession.	Jethro Tull. Marlborough Daniel Defoe
Death of Aurungzebe.			Turnip Townshend. Bakewell. Louis XV.
Clive at Arcot.			Clive.
Clive at Plassey. Wolfe captures Quebec.	1756 -63	Seven Years' War.	Wolfe. Frederick the Great. Catherine the Great.

		British Affairs	
1700	1760	George III becomes King.	
		Industrial Revolution.	
	1761	Bridgewater Canal.	1765
	1764	Hargreaves invents Spinning Jenny.	1770
	1765 -75	Watt's Steam Engine.	1773
			1776
		Improved Roads.	
		Stage Coaches.	1783
			1784
			1787
			1795
1800	1801	Union with Ireland.	
	1812	Early Steam Boat.—The *Comet*.	1814
	1820	George IV becomes King.	
	1825	First Railway opened.	

Empire Affairs		Foreign Affairs	Great Men
	1763	Peace of Paris ends Seven Years' War.	Hargreaves.
Stamp Act.			Arkwright.
Cook explores coast of New Zealand and S.W. Australia.			
Boston Tea Party.			
American Declaration of Independence.			Washington.
			Squire Coke.
Loss of American Colonies.			
India Bill.			
First Settlement in Australia.	1789	French Revolution begins.	
		Napoleonic War.	Napoleon.
Mungo Park explores the Niger.			
			Byron.
			Wordsworth.
	1805	B. of Trafalgar.	Nelson.
	1815	B. of Waterloo.	Wellington.
England takes possession of Cape Colony.	1815	Napoleon exiled to St. Helena.	
		Monarchy restored in France.	Crompton.
	1821 -29	War for Greek Independence.	

		British Affairs	
1800	1829	Catholic Emancipation Bill.	
	1830	William IV becomes King.	
	1832	First Reform Bill.	
	1833	Slave Emancipation.	1836
	1833	First Factory Act.	
	1834	Poor Law Union.	
	1837	Victoria becomes Queen.	1840-1870
	1844	First Telegram.	
	1846	Repeal of Corn Laws.	1857
		Second Factory Act.	
	1858	Transatlantic Cable laid.	
			1867
	1870-72	Education Acts.	1877
	1876	Telephone Invented.	
	1884	Daimler's Motor Car (Germany)	1886
			1890

Empire Affairs		Foreign Affairs	Great Men
	1840	Chinese Ports opened to foreigners.	Morse.
Great Trek in South Africa.	1848	2nd French Republic.	Lord Shaftesbury.
	1848	Revolution in Italy.	Edison.
Livingstone in Africa.	1854	Japanese Ports opened to foreigners.	Livingstone.
Indian Mutiny—End of East India Company.	1854 -56	Crimean War.	Florence Nightingale.
	1860 -61	Italy United.	Garibaldi. Cavour.
	1861 -65	American Civil War.	A. Lincoln. Longfellow.
	1864	"The Red Cross"	Pasteur. Lister.
Dominion of Canada formed.	1869	Suez Canal opened.	de Lesseps.
Annexation of Transvaal.	1870 -71	Franco-Prussian War.	Cecil Rhodes
	1870	3rd French Republic.	
	1871	German Empire established.	Bismarck. Bell.
Gold discovered in Transvaal.			Gordon.
Rhodes in South Africa.			
	1894 -95	War between China and Japan.	

		British Affairs	
1800	1899	Wireless Telegraph established.	1899 1902
1900	1901	Edward VII becomes King.	1901
	1908	Old Age Pensions. National Insurance Act.	
	1910	George V becomes King.	1909
	1918	Fourth Reform Bill. Education Act.	1921
	1926	First Flight to Australia.	
	1927	Wireless Telephony between London and New York.	

Empire Affairs		Foreign Affairs	Great Men
Boer War.			Marconi. Kitchener. Lord Roberts Kruger.
	1903	First successful aeroplane.	Wright.
Australian Commonwealth formed.	1904 -05	War between Russia and Japan	
	1909	North Pole discovered.	Peary.
	1911	South Pole discovered.	Amundsen. Scott.
	1911 -12	Revolution in China—Republic proclaimed.	
	1912 -18	Balkan Wars.	Hardy. Kipling.
Union of South Africa. India Councils Act.	1914	Panama Canal opened.	Barry. Haig.
	1914 -18	Great World War	Jellicoe. Clemenceau.
	1918	Treaty of Versailles.	
Irish Free State formed.	1920	League of Nations established.	President Wilson.
	1922	Egypt became an independent Kingdom.	Sir Ronald Ross. Baird.
	1934	Manchukow became a Monarchy.	Cobham.

Date Due

STAMBOUL TURKEY